

# A retrospective analysis of medial open wedge high tibial osteotomy for varus osteoarthritic knee

**Raju Vaishya**
*Sr Consultant Orthopaedic Surgeon, Indraprastha Apollo Hospitals, New Delhi, India*

**Address for correspondence:** Dr. Raju Vaishya,  
Sr Consultant Orthopaedic Surgeon,  
Indraprastha Apollo Hospitals, New Delhi, India.  
E-mail: [raju.vaishya@gmail.com](mailto:raju.vaishya@gmail.com)

Sir,

I read the article titled “A retrospective analysis of medial open wedge high tibial osteotomy for varus osteoarthritic knee” with great interest.<sup>1</sup> I do agree with the authors that medial open wedge high tibial osteotomy is an established procedure for medial compartment osteoarthritis especially in younger patients.<sup>1-5</sup> There are many ways to perform this procedure, achieve fixation and maintain the osteotomy. The authors have used two types of plates, with and without the use of bone graft and found equally good clinical results. I am concerned about their second technique<sup>1</sup> of using the locking Tomofix plate without the use of any bone graft or substitute, thus leaving the bone gap on the medial side, as a result of opening the medial wedge. Although they have not mentioned any significant complications like nonunion, implant breakage, or loss of correction with this technique, a published report had encountered significant (36.9%) complications with this procedure.<sup>2</sup> It seems illogical to recommend such a procedure where you intentionally leave a bone gap and rely on the lateral bone healing and the implant to stabilize the osteotomy over a longer term, risking the patient for nonunion, implant failure, and apprehending weight bearing. Simply filling the gap with bone graft or a bone substitute like hydroxyapatite<sup>3,4</sup> or tricalcium phosphate wedge will not only cover up the bone deficiency but will also allow early healing and put a lesser load on the implant. Moreover, the use of a tricortical bone graft to fill in the osteotomy gap is not always easy as it is mostly difficult to match the size and shape of the bone graft with that of the osteotomy; hence, I prefer to use tricalcium phosphate wedges (available in different sizes). The need for fixation of the osteotomy by plate and screws is also not always required, in my experience. The resorbable synthetic bone substitute of tricalcium phosphate (OTIS 50®, SBM, France) alone is strong enough to maintain the osteotomy, until bone healing, without any loss of correction. This is perhaps due to the fact that the grafts are under compression on the medial side in an open medial wedge osteotomy, and hence are secured from slipping. The use of metal implants not only increases the surgical exposure and morbidity in these patients, but also requires either single or staged removal of implants for doing total knee arthroplasty in the future.

## REFERENCES

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