High Tibial Osteotomy Decreases Medial Meniscal Extrusion and Improves Clinical Outcomes and Return to Activity: Letter to the Editor

Dear Editor:

We read with interest the article by Astur et al[1] titled, "Medial Opening Wedge High Tibial Osteotomy Decreases Medial Meniscal Extrusion and Improves Clinical Outcomes and Return to Activity," published in April 2020. The objective of the study was "to quantify medial meniscal extrusion (MME) before and after medial opening wedge high tibial osteotomy (HTO) and to correlate the reduction of MME with clinical outcomes and return to activity." Honestly, the objective and results of this study are noteworthy, and we have some questions for the authors.

1. The authors said that MME was measured before HTO and at 6-week follow-up (study protocol) through use of magnetic resonance imaging (MRI). It is well-known that weightbearing was not allowed for 4 weeks after HTO surgery. Patients were then allowed to start partial weightbearing exercise, and full weightbearing was allowed 6 weeks after surgery.[4] Did it make sense to evaluate MME without joint weightbearing after HTO?
2. The authors reported that the measurement method for MME was based on the techniques proposed by Hada et al[3] and Roos et al.[7] After a careful reading of the article by Roos et al, we find that the authors may have made a mistake. We do not find this method described by Roos et al in their paper.
3. The authors noted that postoperative MME was dramatically reduced after HTO. However, we consider that HTO itself may not directly affect the MRI-based measurements of the medial meniscus. Other factors such as osteotomy, fixation models, and tibiofemoral rotational mismatch might have influenced the medial meniscal status. Previous studies[2,5] suggested that a TomoFix plate would provide superior stability under both compression and torsion compared with the Puddu plate. Is there any difference in MME between the 2 fixation methods?
4. The authors discussed that the magnitude of MME might have been underestimated when the measurements were conducted without joint loading. Did the authors consider the effect of knee flexion angle on MME? It is demonstrated that during knee extension to deep flexion, the medial meniscal posterior segment is translated toward the posteromedial direction, with an increase in the medial meniscal posterior extrusion and its thickness.[6] Thus, we believe that it is also important to evaluate the medial meniscal posteromedial extrusion at 90° of flexion and full flexion angles.

Best regards,

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