

To

WORLD JOURNAL OF ORTHOPAEDICS Editor in Chief

Dear Editor,

Dear Editor, Editorial Assistant and Reviewers,

thanks for your suggestions. We modified the manuscript ID (04389493), entitled “PATIENT-SPECIFIC INSTRUMENTATION (PSI) IN TOTAL ANKLE ARTHROPLASTY” by Antonio Mazzotti, Alberto Arceri, Simone Zielli, Simone Bonelli, Valentina Viglione, and Cesare Faldini ” as suggested.

We confirm that the paper has not been published elsewhere, it has not been submitted simultaneously for publication elsewhere and that each author have contributed significantly to the study design, data acquisition, and interpretation. All authors have been actively involved in the drafting and critical revision of the manuscript, and all provided final approval of the version to be published

Thank you in advance for your consideration.

Yours Sincerely,

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Antonio Mazzotti

Reviewer reports:

This review article highlighted the current literature on PSI in Total Ankle Arthroplasty, analyzing the current implants with PSI, templating and preoperative planning strategies, alignment and sizing, clinical outcomes, cost-analysis, and comparison with standard techniques. Total Ankle Arthroplasty outcomes have generally been less satisfactory compared to other arthroplasties. Preoperative planning using Patient-Specific Instrumentation (PSI) theoretically improves implant positioning and alignment. This review article is informative for the scientific community. The author needs to explain the limitation and drawbacks of current strategies in detail. There are few grammatical mistakes.

Response:

We explained both the limitation and drawbacks of traditional instrumentation systems and current strategies using PSI.

See the sentences:

...“As a matter of fact, most of the current TAA instrumentations do not really address patient's variable anatomical features. When using a traditional system the main parameter considered for tibial cutting block is represented by the tibial tuberosity as proximal reference and the middle of the anterior border of the tibiotalar

joint as distal reference. The talar resection is performed with the foot in a visual neutral position ^[2,3]. This technique allows an experienced surgeon a good implant positioning, however many other factors should be considered in order to fully re-establish gait symmetry and natural ankle motion.”

And:

... “Surgical experience is always necessary in order to consider all the factors influencing lower limb alignment, bone, soft tissue or ligament balancing. Moreover, blindly trusting PSI can possibly lead to errors in implant positioning and sizing: for this reason, a surgeon should always know the standard instrumentation and select a different implant size or abandon PSI when necessary.”

...” The insufficiency of corroborating literature and scarcity of studies (in two cases financed by the manufacturer) [17,18] represent the current and main limitations of PSI. Moreover, is not clear whether PSI may be more useful in order to restore ankle neutral alignment when dealing with complex deformities involving the whole lower limb.

Further prospective, randomized, and multicenter studies are therefore necessary to better evaluate PSI and confirm its routine use in TAA.”

The manuscript has been edited and corrected by a Native English speaker, Dr. Catherine A. Dewar.

Thank you for your suggestions.