Arthroplasty Today 7 (2021) 208



Contents lists available at ScienceDirect

Arthroplasty Today



journal homepage: http://www.arthroplastytoday.org/

Letter to the Editor

Response to Letter to the Editor, "Who Restores Hip Biomechanics More Effectively After a Femoral Neck Fracture? Comparison of Total Hip Arthroplasties Performed Either by Hip Surgeons or Orthopedic Residents"

In Reply

We have read with particular interest the comments made by the author on our recent article published in *Arthroplasty Today*, entitled "Who restores hip biomechanics more effectively after a femoral neck fracture? Comparison of total hip arthroplasties performed either by hip surgeons or orthopedic residents".

First, we would like to thank our colleague for reading our article and the pertinent and precise comment. We would like to address our colleague's inquiries, acknowledging the study's limitations that might also lead to the misinterpretation of the results.

We agreed with the author's comment regarding the underestimation of the differences in the leg length measurements. Even though we correctly describe the leg length discrepancy measurement in the Methods section under the subheading Leg-length discrepancy, we made a mistake when drawing the measured parameters. As the correspondent author, I assume the entire responsibility for this misinterpretation.

In this sense, the green line in Figure 1a representing the leg length discrepancy measurement should be proximally moved to the center of the femoral head, to explain our description in the Methods section. Once the leg length discrepancy was measured using the teardrop and lesser trochanter horizontal lines and to get an accurate measurement avoiding underestimation, the discrepancy of the center of rotation must be subtracted to exclude the acetabular factor and obtain the discrepancy only from the femur [1-3].

It is well-known that preoperative templating helps orthopedic surgeons assess leg length discrepancy [4,5], but it is influenced by changes in the position of limbs, pelvis, and radiographic technique. Different methods have been reported to determine discrepancies [1,2,5], but the question remains to be answered, Which better provides the correct measurement? In this sense, we can suggest that radiographic measurements must be associated with clinical measurement methods during preoperative and postoperative assessments to achieve a complete and more accurate analysis.

We are aware of the limitations of our study. However, we want to highlight the importance of performing these types of studies to understand how we supervise and train our residents to develop future training methods and programs. We hope that with these amendments, we correctly answered our colleague's comments.

Conflict of interests

The authors declare there are no conflicts of interest.

Acknowledgment

The study was performed at the Italian Hospital of Buenos Aires, Argentina.

References

- Sarangi PP, Bannister GC. Leg length discrepancy after total hip replacement. Hip Int 1997;7:121.
- [2] Keršič M, Dolinar D, Antolič V, Mavčič B. The impact of leg length discrepancy on clinical outcome of total hip arthroplasty: comparison of four measurement methods. J Arthroplasty 2014;29(1):137.
- [3] Flecher X, Ollivier M, Argenson JN. Lower limb length and offset in total hip arthroplasty. Orthop Traumatol Surg Res 2016;102(1 Suppl):S9.
- [4] Sculco PK, Cottino U, Abdel MP, Sierra RJ. Avoiding hip instability and limb length discrepancy after total hip arthroplasty. Orthop Clin North Am 2016;47(2):327.
- [5] Meermans G, Malik A, Witt J, Haddad F. Preoperative radiographic assessment of limb-length discrepancy in total hip arthroplasty. Clin Orthop Relat Res 2011;469(6):1677.

Fernando Diaz-Dilernia, MD^{*}, Agustin Garcia-Mansilla, MD, Lionel Llano, MD, Martin Buljubasich, MD, Jose Ignacio Oñativia, MD, Pablo Ariel Isidoro Slullitel, MD, Gerardo Zanotti, MD, Fernando Comba, MD, Francisco Piccaluga, MD, Martin Buttaro, MD Hip Surgery Unit, Institute of Orthopaedics "Carlos E. Ottolenghi", Italian Hospital of Buenos Aires, Buenos Aires, Argentina

* Corresponding author. 4247 Potosí Street, C1199ACK Buenos Aires, Argentina. Tel.: 54 11 4959 0200x8409. *E-mail addresses:* ferdiaz18@hotmail.com, fernando.diaz@hospitalitaliano.org.ar, fernandodiazdilernia@gmail.com (F. Diaz-Dilernia).

> 16 November 2020 Available online xxx

DOI of original article: https://doi.org/10.1016/j.artd.2020.12.010.

https://doi.org/10.1016/j.artd.2020.12.013

^{2352-3441/}Copyright © 2020 The Authors. Published by Elsevier Inc. on behalf of The American Association of Hip and Knee Surgeons. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).