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#### Letters to the Editor

#### Dear Editor:

We read carefully and with great interest the review article "Percutaneous Osteotomies in Hallux Valgus: A Systematic Review" by Bia et al (1). The authors made a great effort to summarize the published data on behalf of minimally invasive forefoot surgery and provided information on the degree of recommendation for intervention for each of the procedures. Also, they made a great contribution to the subject, which will be useful for the design of new studies. However, we would like to comment regarding the systematic review and its conclusions.

We agree with the grade of recommendation for the Reverdin-Isham, Bosch, Magnan, and percutaneous double osteotomy procedures given by Bia et al (1). However, we believe the rating for the percutaneous chevron osteotomy (known as a "third-generation technique") is unfair and resulted from an incomplete analysis of the studies.

The original submission date of the systematic review was August 2016 and publication of the definitive report was September 1, 2017. This amount of time from submission to publication has meant that at the time of publication the review was outdated. In addition, the authors had omitted  $\geq 2$  studies (2,3) at the original submission of their report. In addition, another 2 studies (4,5) were reported during the review period of the systematic review, which somehow removes the responsibility for not including them. Nevertheless, we have included them in our letter because they are important studies that change the degree of recommendation for third-generation percutaneous techniques. The studies (2–5) have adequate Coleman method scale scores (6).

In addition, and as explained in the systematic review, non-peer review journals were not included in their analysis (1); however, 2 studies published in the journal *Foot and Ankle Clinics* and another 2 in the journal *Orthopedic Clinics of North American*, both non-peer review journals, were included in their review. Therefore, another additional study could have been included (7).

Bia et al (1) stated that the main risk associated with the chevron osteotomy is excessive shortening of the first metatarsal, owing to the thickness of the burr. In addition, in the absence of intrinsic stability of the osteotomy because of short arms, a risk of secondary displacement exists, with elevatus, loss of correction, and medial rotation if the plantar cut is too short. Although these complications can occur, they were not seen in the presented data (2-5).

The authors also reported that the complication rate has been elevated, even for experienced surgeons, although this has not been the case for third-generation procedures (2–5), and that greater rates can be expected during the initial learning curves, which was confirmed by Jowett and Bedi (4).

Although we agree with Bia et al (1) that this procedure is currently the focus of research and early outcome evaluations, it seems that relevant information was not evaluated. Also, it is true that future research should include adequately sized randomized control trials (levels I and II), standardization of treatment protocols, and the use of validated tools for measurement of clinical outcomes before percutaneous techniques for surgery of the first metatarsal can be validated.

Considering the previously mentioned arguments, we believe that the review by Bia et al (1) might negatively influence the progress and development of minimally invasive third-generation procedures and that this should be analyzed and highlighted. At present, and according to the reported data, the degree of recommendation for thirdgeneration surgeries (Chevron osteotomy) corresponds to level B (Supplemental Table S1).

In conclusion, researchers and opinion leaders must be careful and responsible in providing information regarding new and emerging procedures that have already been proved to have good and excellent results with a low complication rate.

#### **Supplementary Material**

Supplementary material associated with this article can be found in the online version at www.jfas.org https://doi.org/10.1053/ j.jfas.2018.03.007.

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