

**Opening Cuboid Wedge Osteotomy (Zoom Osteotomy) for Triplanar Correction of Flexible Pes Planovalgus Deformities**, Iosue, et. al., *Journal of Foot and Ankle Surgery*, Volume 16, Issue 2, Jan 19, 2022

**Level of Evidence:** 3

**Reviewer:** Jake Loitz, MS-III

Surgeons have described lateral column lengthening in the literature as a powerful, triplanar procedure in the treatment of flatfoot deformity. Traditional approaches such as the Evan's osteotomy and mid-opening osteotomies of the calcaneus are common procedures that restore lateral column length. Risks of these procedures include subtalar joint infringement, medial calcaneal instability, and iatrogenic arthritis. Opening cuboid osteotomy, or Zoom osteotomy, is described as a more forthright approach. The midline of the cuboid is easy to identify, and the osteotomy is reproducible. Fixation can be successfully accomplished with a bone staple, buttress plate, or internal fixation without compromising the subtalar joint. The Zoom osteotomy can also afford correction in all three planes of motion. A final advantage of this procedure is the stability of adjunctive procedures in the calcaneus; this stability is due to the single cut in the calcaneus as opposed to multiple osteotomies.

The electronic medical records of one surgeon were reviewed. Patients who had a Zoom Osteotomy for the treatment of flatfoot deformity were included from August 2013 and December 2019. Exclusion criteria included less than 12 months of follow up, or an incomplete set of postoperative radiology. Cuboid abduction angle and Meary's angle were assessed pre and postoperatively. 35 patients were included in this study, with a total of 51 feet receiving an opening cuboid wedge osteotomy. Post-operative Meary's angle improved significantly from a mean of 10.5 to 2 degrees ( $p < .001$ ). Post-operative Cuboid abduction angle improved significantly with a mean of 20.3 to 6.6 degrees ( $p < .001$ ). A total of 3 feet (6%) experienced complications such as wound dehiscence, neuritis, and deep vein thrombosis.

Early results of the Zoom osteotomy are favorable. Postoperative correction Meary's and Cuboid abduction angle were statistically significant. Complications were only present in 6% of patients. Further comparative studies are essential to assess if opening cuboid osteotomy can provide the same radiographic correction as an Evan's osteotomy or a mid-opening osteotomy. Limitations of this review include the retrospective nature of this study, the use of adjunctive procedures with the zoom osteotomy, and a single surgeon's experience. Physicians should consider the Zoom Opening Cuboid Osteotomy when coupled with an adjunctive procedure as a potential alternative to the Evan's Osteotomy in the correction of flatfoot deformity.

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