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Title

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Outcomes for Metal Spacers in Treating Hind Foot Bony Defects

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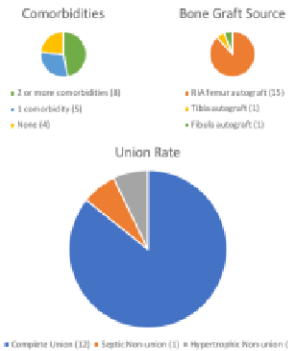
BACKGROUND

- The morbidity associated with large bony defects can be debilitating for patients and leaves few options for surgeons.
- Tantalum and 3-D metal spacers (Zimmer, Warsaw, IN) are a recent innovation for large bony defects, specifically for use in the hindfoot.
- Our purpose is to retrospectively review the surgical outcomes, union rates, and complications with patients who underwent metal spacer implantation.



RESULTS

- 17 patients were included, average age of 62 (range 47-78 years)
 - 14 received tibiotalocalcaneal arthrodesis
 - 3 received isolated subtalar arthrodesis
- 76% of patients had one or more comorbidities
- 3 patients lost to follow-up
- Union Rate:
 - 12 of 14 patients not lost to follow-up went on to union
 - 2 patients with non-union, both required reoperations
- Transition to weight bearing in average of 9 weeks (range 6-20)



CONCLUSION

- The authors advocate for the use of metal spacers as a result of the clinical success and minimal patient complications demonstrated in this study.
- The use of metal spacers combined with autograft can eliminate the risks associated with large bulk allograft procedures.
- Larger case series are needed to further validate the long-term outcomes of this technique.



Trabecular Metal implant filled with RIA autograft to be placed in bone defect. RIA, Reamer/Irrigator/Aspirator.

METHODS



- Retrospective review of all patients who had a hindfoot metal implant placed from 2012 to 2020 at a single academic institution by 2 fellowship trained orthopaedic physicians.
- Indications:
 - Patients > 18 years of age who had large hindfoot bony defects
- Primary outcomes:
 - Achievement of radiographic union
 - Post-operative complications
 - Need for further surgery

DISCUSSION

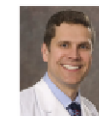
- Tantalum and 3-D metal implants offer a great structural graft option for patients undergoing tibiotalocalcaneal or subtalar fusion in the setting of a large hindfoot bony defect.
- The method described combining the use of orthobiologics, autograft, and adequate biomechanical stabilization can produce reliable results for a complex clinical problem.
- Limitations:
 - Small sample size
 - Retrospective design
 - 3 patients lost to follow-up
 - This paper does not apply to other orthopaedic procedures outside of the hindfoot

ACKNOWLEDGEMENTS

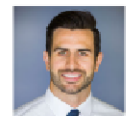
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Christopher Kreulen, MD



Eric Giza, MD



Max Haffner, MD