EVALUATION OF COMPRESSION OF THE TARSOMETATARSAL JOINT USING A COMPRESSION PLATE

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My Disclosure is in the Final AOFAS program book.
I have no potential conflicts with this presentation.
BACKGROUND

- Arthrodesis of the TMT joint is commonly indicated for painful arthritis or fractures of the joint.
- Fusion and constant compression of the joint using a plate is essential for allowing proper healing to occur.
- Little clinical data exists regarding the amount of compression such plates attain.
- Furthermore, procedures differ with regards to the addition of a lag screw to the plate.
METHODS

• OrthoPro TCP plates were placed onto below knee cadaveric specimens, half of which also employed the use of a lag screw

• A compression sensor was placed in between the joint to measure force of compression over time
METHODS

(www.northcoastfootcare.com)
Compression Plate Only

Specimen 1

Specimen 2

Specimen 3

Specimen 4

Specimen 5

Compression Plate with Lag Screw

Specimen 6

Specimen 7

Specimen 8

Specimen 9

Specimen 10
SUMMARY

• Force of compression was initially elevated in both plate only and plate with lag screw constructs
• Inevitably compression dropped to zero in both constructs
• Nevertheless insertion of a lag screw maintained compression longer
• Future research will compare these plates to other methods of compression to determine which may have the best clinical outcome
REFERENCES

