Changes in Patient Balance and Function Two Years Following Total Ankle Replacement

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Disclosures are in the Final AOFAS Program Book

Conflict of Interest
Total Ankle Replacement (TAR) is an alternative to arthrodesis for end-stage, painful ankle OA \(^1-3, 5-6\) 

Little know about patient function and balance following TAR\(^4\)

**Purpose**

- Examine changes in balance and function preoperatively, 1 yr and 2 yr postoperatively
Methods

113 Consecutive TAR patients

Exclusion:
- Revision TAR
- Fusion Takedown,
- Contralateral TAR
  - Current or planned
- Use of Assistive Device
- RA

Assessment Times:
- Pre-op
- 1 year post-op
- 2 years post-op

N = 49

N = 64
Methods

Patient Reported Measures
- AOFAS Hindfoot Scale
- SF-36
- Short Form Musculoskeletal Assessment
- Visual Analog Pain Scale
- Foot and Ankle Disability Index

Functional Measures
- Short Physical Performance Battery
  - Feet Shoulder Width (SW)
  - Feet Together (FT)
  - Semi Tandem (ST)
  - Tandem (Tan)
- Walking Speed (5 meter walk)
- 4 Square Step Test
All 1yr and 2yr were significantly improved from pre-op

FADI → Also improved between 1 year and 2 years post-op
**Functional Outcomes**

- Walking Speed (m/s)
  - Pre-op
  - 1yr
  - 2yr

- Balance Score
  - Pre-op
  - 1yr
  - 2yr

- Four Square (s)
  - Pre-op
  - 1yr
  - 2yr
Short Physical Performance Battery

- No Differences across time for any balance time
Conclusion

- 1 yr following TAR → improved functional outcomes compared to before surgery
- Outcomes were maintained/improved by 2 yrs following surgery
- Patients demonstrate improvements in function/balance following TAR
- Walking speed and balance still far below age matched control subjects
- Safe community dwelling walking speed 1.3 m/s: 2yr post-TAR walk speed 1.18 m/s TAR.


