

Infected TEA

Thomas Wright MD
University of Florida Department of
Orthopaedics and Rehabilitation
Gainesville, Fl.

UF Orthopaedics and Rehabilitation

Disclosure

- Nada related to this topic

UF Orthopaedics and Rehabilitation

Introduction

- Incidence
- Treatment
- Results of Treatment
- What I believe to be true but will never be able to prove
- Conclusion

UF Orthopaedics and Rehabilitation

TEA Infection

- Incidence - 3-11%
- Risk factors
 - RA
 - Previous surgery
 - Previous infection
 - TNF antagonists
 - Dmards

UF Orthopaedics and Rehabilitation

Infection Presentation

- Pain – might be absent on steroids
- Effusion
- Stiffness
- Erythema/induration
- Failed triceps repair
- Osteolysis
- Drainage
- Serologic markers?

UF Orthopaedics and Rehabilitation

Most Common Pathogens

- Staph Epi
- Methacillin sensitive staph
- P. acne
- Klebsiella

UF Orthopaedics and Rehabilitation

Treatment Options

- Debride and retain
- Suppression
- 2 stage reconstruction
- Primary exchange arthroplasty?
- Resection arthroplasty

UF Orthopaedics and Rehabilitation

Debride and Retain

- Symptoms less than 30 days
- Not Staph Epi/P.Acne
- Well fixed components
- Good soft tissue envelope
- Good host

UF Orthopaedics and Rehabilitation

Debride and Retain

- Mayo Series - Success
 - 50%
 - 70% - not staph epi (biofilm champion)

UF Orthopaedics and Rehabilitation

Debridement and Retention

- Streubel et al Bone Joint J. 2016
 - 21 elbow
 - I+D unlink remove poly place beads
 - Iv antibiotics
 - Repeat I+D and relink
 - 6 subsequent operations
 - 1 persistent infection

UF Orthopaedics and Rehabilitation

Suppression

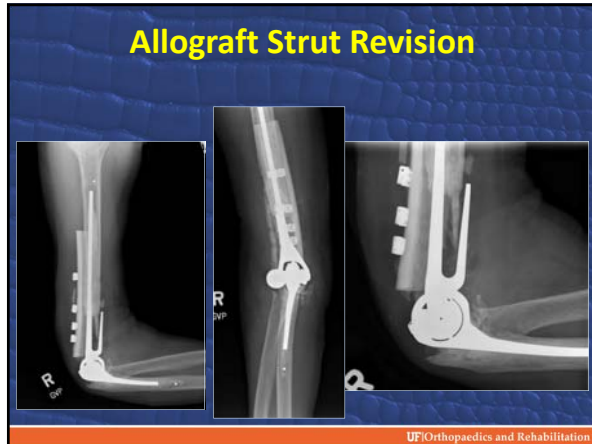
- Frail host
- Implants not loose
- Fair function
- Treatment worse than disease
- No data

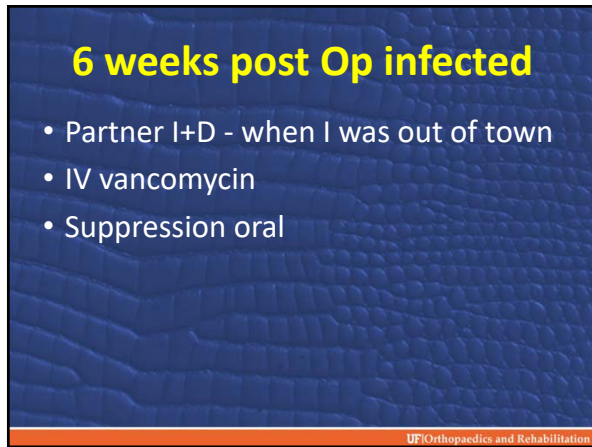
UF Orthopaedics and Rehabilitation

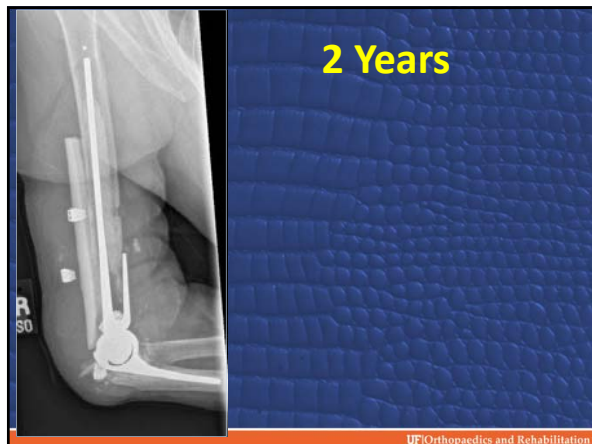
Peri Prosthetic Fracture s/p 2 revision TEAs



UF Orthopaedics and Rehabilitation









Two Stage

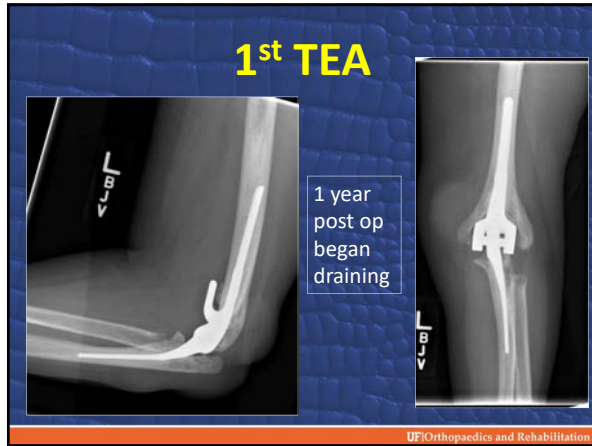
- Success rate – 70-80%
 - Remove all foreign material
 - Antibiotic spacer
 - 6 weeks iv antibiotics
 - Reimplant

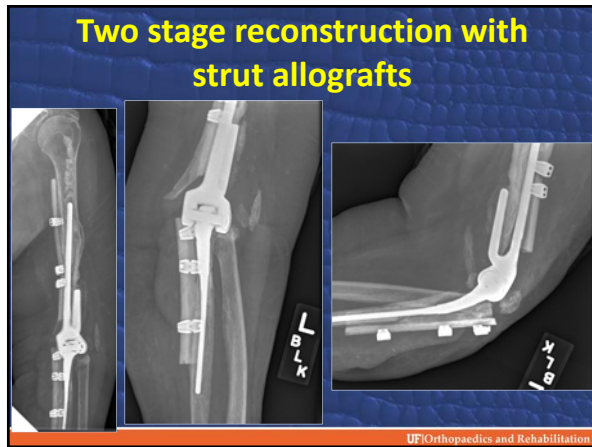
UF Orthopaedics and Rehabilitation

2- Stage Reconstruction

- Peach et al JBJS 2013
 - 12% recurrent infection
 - Most manifested within 10 month
 - MEPS 81

UF Orthopaedics and Rehabilitation







Primary Exchange Arthroplasty

- No data – limited experience
- If performed criteria
 - Good host
 - Good debridement
 - Good soft tissues
 - Reconstruct without structural allograft

UF Orthopaedics and Rehabilitation

Resection Arthroplasty

- Frail host
- Bad soft tissue envelope
- Multiple operations
- Infection not cleared
- Works best if medial and lateral columns intact

UF Orthopaedics and Rehabilitation

Resection Arthroplasty

- Rhee et al JSES 2016
 - 10 elbows
 - 1 recurrent infection
 - MEPS 50
 - Best MEPS when both columns preserved
- Zarkadas et al JBJS 2010
 - 51 elbows
 - MEPS 60

UF Orthopaedics and Rehabilitation

What I believe to be True but will never be able to Prove

- Triceps on approach – leaves vascular layer between incision and TEA
- Surgery under 2 hours – some data
- Antibiotic (Vanc) PRP and PPP to seal wound promote hemostasis, facilitate wound healing (no data)
- Antibiotic cement
- Immobilize in extension until wound healed
- Iv Vancomycin

UF Orthopaedics and Rehabilitation

Conclusion

- Avoidance best
- Infection after primary TEA still too common
- Infection TEA can be salvaged but at best only about 70%
- Morbidity is severe – room for improvement

UF Orthopaedics and Rehabilitation



UF College of Medicine
UNIVERSITY OF FLORIDA
