OTA Specialty Day Review

Jeffrey M. Smith, M.D.
Orthopaedic Traumatologist
Orthopaedic Trauma & Fracture Specialists

Director, San Diego Orthopaedic Trauma Fellowship
OTFS Research & Education Foundation

Disclosures

Smith & Nephew – Education Consultant

Medtronic – Consultant

Stryker – Consultant

Synthes – Fellowship Support

Disclosures

OTFS Research & Education Foundation - Chairman of Board

OTA, Public Relations & Branding Committee - Chairman

Disclosures

I believe that many more Orthopaedic Surgeons should participate in on-call panels.

I believe that on-call should NOT be mandated.

Introduction

Sleep Deprivation and Fatigue Management in Orthopaedics: *Is mandatory disclosure or duty hour restrictions the answer?*

Resident Work Hours

ACGME Policies (July 2003)

Resident Work Hours

ACGME Policies (July 2003)
IOM Report (2008)

Resident Work Hours

ACGME Policies (July 2003)
IOM Report (2008)
ACGME Policies (2011)

Resident Work Hours

ACGME Policies (July 2003)
IOM Report (2008)
ACGME Policies (2011)
AAOS Position Statement

Resident Work Hours

Stephen Albanese, Syracuse, ABOS

Physician Fatigue

Michael Nurok, MBChB, PhD
New York, Cornell Medical College
Dept. of Anesthesia, HSS

Physician Fatigue

Sleep deprivation
- effects performance
- evidence of harm

Opposes self-regulation

Physician Fatigue

Informed Consent

Most patients would be concerned about their safety if they knew that their doctor had been awake for 24 hours.

Blum et al., *BMC Med*, 2010

Physician Fatigue

Supports hospital regulations that prohibit scheduling of elective surgery on post-call days.

Priority rescheduling of cancelled cases.

Avoid unintended consequences of proposed solutions.

Sleep Deprivation & Fatigue Management

Carlos Pellegrini, MD, FACS
Seattle, Univ. of Washington
American College of Surgeons

Sleep Deprivation & Fatigue Management

Become knowledgeable of effects of sleep deprivation

Team Training

FAA Regulations to train in fatigue mitigation

Sleep Deprivation & Fatigue Management

Gregory Belenky, MD
Spokane, Washington State University
Sleep and Performance Research Center

Sleep Deprivation & Fatigue Management

Create adequate sleep opportunity on the job

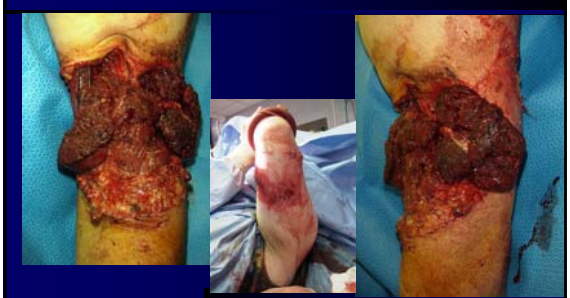
Sleep actually taken

Crew resource management

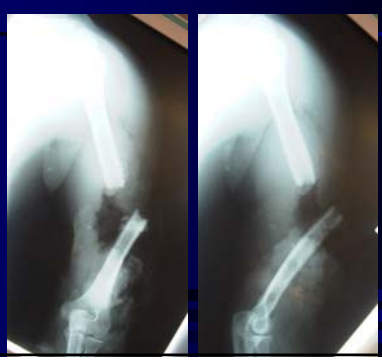
Burden of Musculoskeletal Injury During War and Opportunities for Orthopaedic Community

Joe Hsu

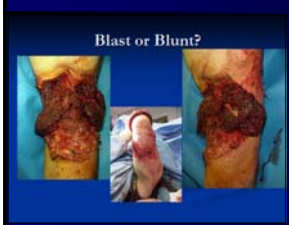
Blast or Blunt?



Blast or Blunt?



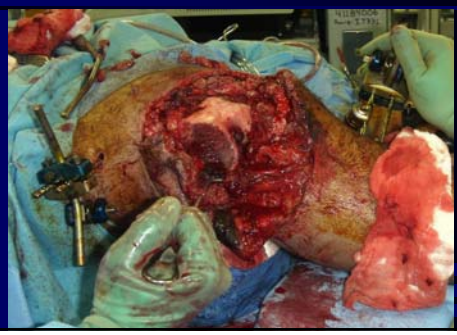
Mechanism of Injury?



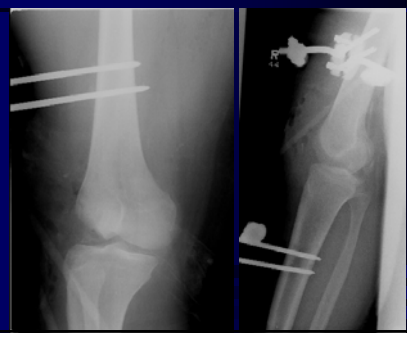
A. Dismounted patrol, anti-personnel mine

B. Rollover MVA

Fx-dislocation, osteoarticular loss, no extensor mechanism



Blast or Blunt?

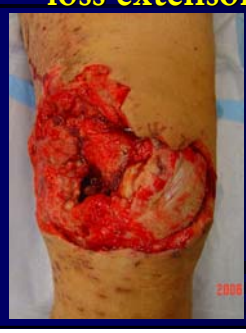


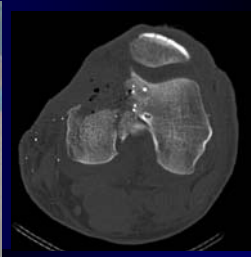
Mechanism of Injury?

A. Mounted, RPG passenger side

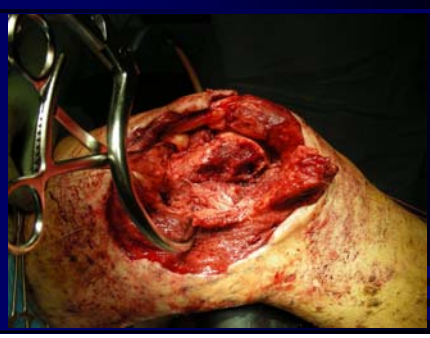
B. High speed wheelie motorcycle

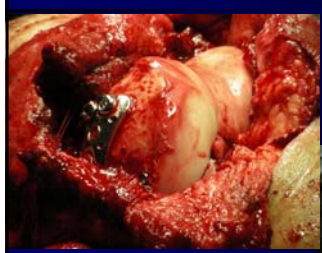
Osteoarticular loss, partial loss extensor mechanism





Blast





Extremity Injury Burden War

"Characterization of extremity wounds in Operation Iraqi Freedom and Operation Enduring Freedom."
Owens, B. D., J. F. Kragh, Jr., et al. (2007)
J Orthop Trauma 21(4): 254-7

"Resource Utilization and Disability Outcomes Assessment of Combat Casualties from Operation Iraqi Freedom and Operation Enduring Freedom"
Brendan David Masini, MD; Scott M Waterman, MD; Joseph C Wenke, PhD; Brett D Owens, MD; Joseph R Hsu, MD; James R Ficke, MD.
Journal of Orthopaedic Trauma. 2009 Apr;23(4):261-6

"Rehospitalization After Combat Injury"
CPT(P) Brendan D. Masini, MD, LTC Joseph R. Hsu, MD, LTC Brett D. Owens, MD, Joseph C. Wenke, PhD.
J Trauma 2011 Jul;71(1 Suppl):S98-102

"Battlefield Orthopaedic Injuries Cause the Majority of Long-term Disabilities"
CPT Jessica D. Cross, MD, COL James R. Ficke, MD, MAJ Joseph R. Hsu, MD, CPT Brendan D. Masini, MD, Joseph C. Wenke, PhD
Journal of the American Academy of Orthopaedic Surgeons. 2011, Vol 19, Supplement 1, S1-7.

James Ficke

Combat injuries

- average 2.3 injuries per injured soldier
- 84% of wounded warriors have at least one orthopaedic unfitting condition

James Ficke

Tremendous burden of injury

Disease / non-battle injuries comprise > 2/3 of loss of fighting force

Musculoskeletal disability losses

>50% from non-battle injuries

>70% of disabilities from battle injury

James Ficke

Continued research to improve long term care of orthopaedic conditions is imperative

OTA Annual Meeting Highlight Papers

Posterolateral Antiglide Versus Lateral Plating for SE Pattern Ankle Fractures: A Multicenter Randomized Control Trial

P. Tornetta, et al, Multicenter

- No difference in patient-based outcomes, wound complications, wound sensitivity, and peroneal irritation
- Minor differences favor antiglide plates at 12 weeks, but not later.

Efficacy of Popliteal Block in Postoperative Pain Control After Ankle Fracture Fixation: A Prospective Randomized Study

R. Goldstein, et al. (K. Egol, N. Nejwani)

- Improved post-operative pain control
- Significant increase in pain between 12 – 24 hours (needs to be anticipated)

Quality of Life and Sexual Function Following Traumatic Pelvic Fractures

K. Harvey-Kelly, et al, (P. Giannoudis)
Univ. of Leeds, United Kingdom

- Both genders significant decrease quality of life (pain, usual activities, mobility) and sexual function
- Urinary tract injury independent risk factor for sexual dysfunction ($p < 0.0001$)
- Pelvic fracture severity also correlates to sexual dysfunction ($p = 0.0463$)

Timing of Orthopaedic Surgery in Multiple Trauma Patients: Development of a Protocol for Early Appropriate Care

H. Vallier, et al, (J. Wilbur), MetroHealth, Cleveland

- Model to predict complications in order to reduce complications and costs
- Acidosis on presentation (pH, base excess, or lactate) predictive of complications
- Correction of pH in first 8 hours to >7.25 reduces risk of pulmonary complications

Can We Trust Intraoperative Culture Results in Nonunions?

D. Altman, et al, Allegheny General, Pittsburgh

- Nonunions and hardware tested for bacterial contamination and biofilms with standard cultures
- 67% 23 of 34 patients were culture negative but DNA positive
  - 6/23 required additional surgeries to achieve union
- 27% 9 of 34 patients culture positive (and DNA +)
  - 3/9 required additional surgeries for infection or

Functional Outcomes in Elderly Patients With Acetabular Fractures Treated With Minimally Invasive Reduction and Percutaneous Fixation

J. Gary, et al. (C. Reihart, A. Starr)
U. Texas Southwestern, Dallas

- Functional outcomes and rates of conversion to total hip arthroplasty treated with this technique
- 30% (11 / 36) underwent conversion
- no significant differences compared to published series of those treated with ORIF

Surgical Treatment Improves Clinical and Functional Outcomes for Patients Who Sustain Incomplete Bisphosphanate-Induced Femur Fractures

K. Egol, et al, NYU Hospital for Joint Diseases

- 50% of incomplete fractures ultimately required surgical intervention for relief of pain symptoms
- Functional outcomes (SMFA) better with operative treatment at average 16.4 months

Effect of Negative-Pressure Wound Therapy on Elution of Antibiotics from Polymethylmethacrylate Beads in a Porcine Simulated Open Femur Fracture Model

T. Large, et al, Travis AFB, South Bend, IN

- Concurrent application NPWT and antibiotic beads
- Simulated open femur fractures in pigs
- No decrease local antibiotic concentrations in wounds
- Decreased total amount eluted locally available when fascia left open

Quality of Life Following Acetabular Fracture Surgery, Importance of Reduction

T. Borg, S. Larsson, Uppsala Univ., Sweden

- Anatomic reduction better Quality of Life based upon SF-36 and LiSat-11
- As compared to residual displacement 2mm or more

Patient Variables That May Predict Length of Stay and Incurred Hospital Costs in Elderly Patients With Low-Energy Hip Fracture

A. Garcia, et al, (W. Obremskey), Vanderbilt

- ASA classification useful in estimating length of stay
- Recommends tiered reimbursement model

Postsplinting Radiographs of Minimally Displaced Fractures: Good Medicine or Medicolegal?

S. Chaudhry, et al, (K. Egol)
NYU Hospital for Joint Diseases

- Longer waits, additional radiation exposure, and increased health care costs.
- 0 of 204 fractures (134 nondisplaced, 70 minimally displaced or angulated) showed a change postsplinting

The Importance of Trauma Center Care on Mortality and Function Following Pelvic Ring and Acetabular Injuries

S. Morshed, et al, UCSF and U. Washington, Seattle

- Level 1 trauma center vs. nontrauma centers
- Mortality risk less
- Improved physical functioning at 1 year

Professional Liability and Trauma Call

Injured patients receive 28 cents on dollar

60% patient compensation goes to admin fees, primarily legal fees

2011 AAOS Medical Liability Survey

Average premium $34,920
Median $30,000

Average respondent sued 3.17 times in career

2011 AAOS Medical Liability Survey

Vast majority either settled or dismissed

Trial – surgeon successfully defended 92%

2011 AAOS Medical Liability Survey

Expert witnesses

Defense	78% AAOS Fellow
Plaintiff	68% AAOS Fellow
	3x more likely retired
	2x more likely out of state

Physician Insurers Association of America (PIAA) Study

Average indemnity payment rose 13%
~ $233,000 to $270,000

7th highest average indemnity

1/3 of claims paid

45% of claims sited improper performance

Case Examples

Steven Rabin, MD

Compartment Syndrome
Don't Ignore Pain

Case Examples

Steven Rabin, MD

Infection

Most lawsuits related to draining wound observed for long time or inadequately treated with oral antibiotics until too late to easily treat.

Case Examples

Steven Rabin, MD

Iatrogenic Nerve Injury

Most defensible

Case Examples

Steven Rabin, MD

Iatrogenic Nerve Injury

Most defensible

Failure to Understand

Failure to Get Help

Case Examples

Steven Rabin, MD

Errors made by Others (your assistants)

…More People to Be Willing to Take Trauma Call

James Kellam, MD

Barriers to Providing Good Care

- Disruption to surgeon or family lifestyle
- Inadequate compensation
- Disruption to elective practice
- Uninsured patient volume
- Increased liability risk
- Inadequate training

…More People to Be Willing to Take Trauma Call

James Kellam, MD

Solutions

- Lifestyle
- Compensation
- Liability reform
- Skill level
- Hospital support
- Professionalism

et al, *JBJS Br*, 2004

Community Member

Spend 50% of professional time in clinical practice, teaching and/or research regarding matters directly related to orthopaedic traumatology.

Instructions for Completion of Application

Note: To be considered in a given year, the deadline for receipt of applications and materials is November 1 of that year. Applications are then reviewed and acted upon by the OTA Membership Committee and the OTA Board of Directors. Accepted applicants will be notified prior to the OTA Specialty Day held during the AAOS Annual Meeting.

Please review the accompanying list of membership categories and their requirements to ensure that you are applying for the appropriate category.

1. An online application must be completed in its entirety.
2. The following must be provided online and accompany your online application:
   a) Current curriculum vitae (word.doc)
   b) A recent photograph (jpeg/jpg or gif.)
   c) Payment in the amount of $50.00 (USD) by Visa, MasterCard or AMEX (active duty military and SIGN members are exempt).
3. Send a copy of the sponsor form to your sponsor(s) and request that the form(s) be returned directly to OTA at the address below or faxed (847-823-0536).

   Membership Coordinator
   Orthopaedic Trauma Association
   6300 River Road, Suite 727
   Rosemont, IL 60018

4. No applications will be processed until all required documents are received by the OTA staff office.

Application Deadline:

November 1, 2011

2012 OTA Membership Counts (updated 1/10/12)

Active: 482
Allied Health: 44
Associate: 84
Community: 246
Emeritus: 46
Honorary: 2
International: 80
International Community: 51
International Research: 1
Research: 11
Senior: 1
Candidate: 438
Total: 1486

Active Military Duty Status
including - 14 Active
4 Allied Health
8 Associate
67 Candidate
35 Community

Thank You

Jeffrey M. Smith, M.D.
Orthopaedic Traumatologist
Orthopaedic Trauma & Fracture Specialists

Director, San Diego Orthopaedic Trauma Fellowship
OTFS Research & Education Foundation