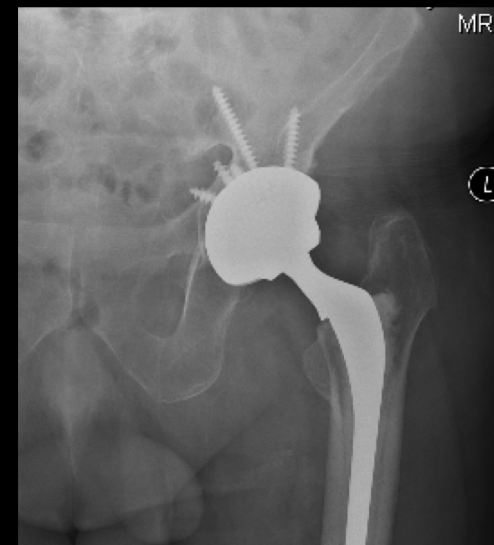


Creating Hip Fracture Care: It takes a Village

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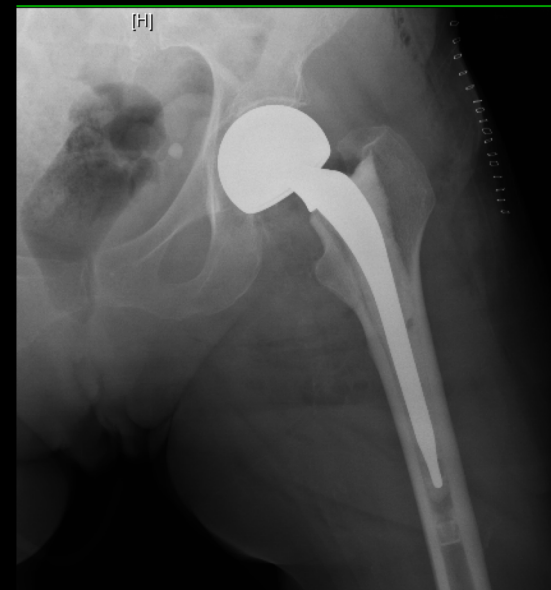
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Financial Disclosures

- Consultant for Biocomposites, Inc.
 - Consultant for Smith and Nephew, Inc.
 - Consultant for Orthalign
 - AAHKS Committee Member
-
- No relevant financial disclosures related to this presentation

Objectives

- Significance of Hip Fractures
- Discuss Hip Fracture Care as a Multidisciplinary Endeavor
 - Inpatient team
 - Anesthesia
 - Surgical team
 - Post Surgical care team
- Results of a Hip Fracture Program



Goals of Hip Fracture Care

- Promote early ambulation
- Prevent complications from immobility
 - DVT, bed sores, pneumonia
- Avoid secondary surgeries
 - Sequelae of non/mal union



Hip Fractures: Financial Impact

- Estimates at 320,000 cases/year and rising
- Estimated cost of 9-20 billion USD
- Mean cost \$39,437 \pm \$46,645
 - Pincus et al JBJS 2018
- Mean cost \$10,075 for index hospitalization and \$43,669 related 12-month health and social costs
 - Williamson et al Osteoporosis Int. 2017

Cost of Delayed Care

- Propensity matched study of 42k Hip fracture patients
- Delay of >24 hours in surgery resulted in and increased mean 12-month cost of care by \$2638

Other “Costs” of Delayed Care

- Meta Analysis on delay of surgery between 24 and 48 hours
 - Increased risk of **DEATH**
 - Increased risk of **PRESSURE SORES**
 - Moja et al PLoS One 2012
- Multicenter Database review of 4215 patients
 - Delay of ≥ 2 days resulted in increased complication rate
 - Anthony et al JOA 2017
- Review of National Inpatient Sample (2 million cases)
 - Delay of 2 days conferred higher mortality risk
 - Ryan et al JOT 2015

Additional Goals of Hip Fracture Treatment

- Operate within 24-48 hours
 - Patient needs to be worked-up/cleared
 - Anticoagulation reversed
 - Medical Comorbidities managed and acutely optimized
- **Surgical intervention needs to be selected and executed well**
 - Promote early ambulation
 - Prevent complications from immobility
 - **Avoid secondary surgeries**
- Post operative care needs to minimize risk of subsequent fractures
 - **Promote bone health**
 - Improve rehab and strengthening
 - Prevent future falls

It Takes a Team!!!!





If you want to go fast, go
alone. If you want to go
far, you need a team.

-John Wooden

LeanLeader.org

Team Members

- Hospitalist (internal med, family med, gerontology)
- Orthopaedic Surgeon
- PT/OT/Nursing
- Short stay facilities
- Metabolic Bone Provider (Ortho, Endocrine, Rheumatology, Medicine)

Dedicated Multidisciplinary Hip Fracture Care Programs: Reduction in Adverse Events

- Geriatric co-management program evaluated
- Global Trigger Tool
- 2010-2014 (1yr prior and 2 yrs after program)
- 12%/year reduction in adverse events
- 128 → 34 events per 100 admissions

MDHFT: Reduces Cost and LOS

Cohort 1: Old Way; N=31

- ICU admission 48%
- ICU LOS 8.1 days
- Total LOS 9.9 days
- Cost of admission: \$52,323

Cohort 2: MDHFT; N=115

- ICU admission 23%
- ICU LOS 1.8 days
- Total LOS 7.1 days
- Cost of admission: \$38,586

Della Rocca et al
Geriatr Orthop Surg Rehab
2013

MDHFT: Decreases time to OR

- Surgery within 48 hours ↑ from 86% to 96%
- Time to surgery reduced from 27 to 21 hours
- Length of stay reduced by 1.6 days

MDHFT: Reduces risk of subsequent fractures

- Orthopaedic based osteoporosis management leads to
 - Longer median time to fracture (998 vs 743 days)
 - Lower risk of subsequent fracture (HR 0.8)
 - Higher likelihood of having osteoporosis meds filled (HR 1.7)
 - No difference in cost

Sietsema et al
JBJS 2018



Things a Surgeon Can Control

- Cemented Stems in Osteoporotic bone
 - Veldman et al JBJS 2017
 - Barenius et al JBJS 2018
 - Imam et al Int Orthop 2019
 - Springer et al JOA 2019
- TXA for EVERYONE!!!!!!
 - Watts et al JOT 2017
 - Whiting et al COOR 2014
 - Sabbag et al JOA 2017



Conclusion

- MDHFT's work
 - Decrease adverse events
 - Decrease LOS
 - Decrease cost
 - Improve outcomes
 - Lower risk of future fractures
- Guidelines and Certification available
 - International Geriatric Fracture Society (IGFS)
 - <https://www.geriatricfracture.org/page/Certification>

Thank You



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