Outpatient Joint Replacement
The Patient is Going Home?

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Disclosures

None relevant to this presentation
Joint Replacement

- Excellent results
- Eliminates pain
- One surgery
- Long term results
Traditional Roles

- Surgeons did surgery
- Implants evolved
Traditional Roles

- Anesthesia - pain control
- PCA
Hospital Stay

- Minimal discomfort
- Functional ambulation
- Acceptable range of motion
Technology Advancement
Welcome to the Future
Changing Our Perception

• Patients want a quick recovery
• Return to work/activity
• Many good techniques
**Arthroplasty in U.S.**

FUTURE?

iPhone 4

iPhone 5

iPhone 6

iPhone 7
Changes in practice

• Knee arthroscopy

• Fracture care

• Lap cholecystectomy

• PACS
Inpatient Procedures

• 51.4 million in US

• Cardiac cath, C-section, Endoscopic/1 million each

• Total knee replacement: 719,000

• Total hip replacement: 332,000
RIO™ Robotic Arm Interactive Orthopedic System
Hana Table
Benefits

• Eliminate Hospital Stay
• Fewer complications
• Improve Outcomes
• Increase Patient Satisfaction
• Economics
• Surgery is only part of the solution!
The Steelers, 1976 Super Bowl Champs
Comprehensive Approach

• Education
• Anesthesia Team
• Rehabilitation
• HHC
• Support Staff
Team Approach
Synergy of a Comprehensive Approach

Surgery

Pain Management

Rehabilitation & Education
Synergy of a Comprehensive Approach

Surgery
Surgery

• Minimally Invasive Surgery – MIS
  – Midvastus, Subvastus Approach

• Meticulous hemostasis
  – Tranexamic acid
  – Eliminate use of drains
Surgery

• Soft Tissues

• Intra-articular injections
  – Pain cocktails
  – Liposomal bupivacaine
Synergy of a Comprehensive Approach

Surgery

Pain Management
Pain Management

• Pre-op
  – NSAID
  – Narcotic
  – Scopolamine patch
  – Adductor Nerve block
  – Spinal anesthetic
Pain Management

Intra-operative

– Anesthesia
– Dexamethasone
– Anti-emetic
– Liposomal bupivacaine – (Exparel)
Pain Management

- Post-operative
  - Narcotic – long and short acting
  - NSAID
  - Tylenol
  - Gabapentin
  - Pregabalin
Synergy of a Comprehensive Approach

Surgery

Pain Management

Education and Rehabilitation
Education

• Pre-operative
  – Office visit
  – Physical therapy
  – Anesthesia
  – Prescriptions
  – HHC assessment
Rehabilitation

- Pre-operative assessment
- Post-operative PT
- HHC Daily PT post-op
- Early Outpatient PT
Synergy of a Comprehensive Approach

Surgery

Rapid Recovery

Pain Management

Rehabilitation & Education
Outpatient TJA Protocol

• Surgeon

• PCP/Internist

• Anesthesia

• PmedHx
  – Obesity, cardiac, pulmonary disease

• Pre-op labs – Hg, Cr
Outpatient TJA Protocol

Pre-operative

• Celebrex
• OxyContin
• Scopolamine Transdermal Patch
• Adductor Nerve Block/Spinal
Outpatient TJA Protocol
Intra-operative

General Anesthesia – LMA
Decadron
Narcotics
Reglan/Zofran
Outpatient TJA Protocol

Exparel

Bupivacaine

Tranexamic acid
Outpatient TJA Protocol

Post-operative

Oxycodone/acetaminophen

Celebrex

Reglan

Stool Softeners
Outpatient TJA Protocol

Venous Compression Stockings
Mechanical Compression Devices
Knee Immobilizer
Walker
Cryotherapy
Outpatient TJA Protocol

- Physical Therapy Prior to Leaving facility
- Pain Controlled
- Foley Catheter removed and void
- VSS
Outpatient TJA Protocol

• HHC – POD#1
• PT & Nurse visits
• Office Follow-up visit in 2 weeks
• Outpatient PT 2 weeks
Surgery

Rehabilitation & Education

Pain Management

Outpatient TJA
Safety of UKA

• Berger, et al

• 105 outpt UKA

• One patient readmitted in 1st 12 weeks
  – Infection - required surgery

Readmission Rates

- Beaver, et al. AAOS 2014 Annual Meeting
- 137 outpts/98 inpts
- Inpatient – 5.7%
- Outpatient – 10.1%
- ER visits - 6.7% vs 12.4%

“no statistical significant difference”
Outpatient TJA

• Berend, et al
• 530 outpt TJA
• 193 THA, 167 TKA, 170 UKA
• 485 pts d/c home
• 45 pts (8.5%) overnight stay
Outpatient TJA

- Berger AAOS 2009
- 111 pts (25 UKA, 86 TKA)
- 94% home day of surgery (TKA)
- 4 pts (3.6%) readmitted
  - 2 anemia, 1 GI bleed, 1 DVT
- Conclusion
  - Safe, Effective procedure
  - Screen TKA pts carefully
Outpatient TJA

• Berger – AAOS 2014 Meeting

• 537 primary TJA

• 338 (63%) d/c home same day
Economic Impact

• AAOS 2009

• 1 million U.S. patients were hospitalized for 4 to 5 days last year after undergoing joint replacement surgery, shorter hospital stays could have eliminated 3 million to 4 million hospital days.
Cost Average Hospital Day

• Florida

• State/local government hospitals — $1,652

• Nonprofit hospitals — $2,090

• For-profit hospitals — $1,447

• *Becker’s Hospital Review 2014*
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• Cdc.gov 2010 National Hospital Discharge Survey
**Cost**

- **TKA**
  - $49,500 to $57,000
  - 719,000/yr
  - $35.9 billion
FOISC Experience

• 7 Surgeons
• 2008-present
• UKA – 102
• TKA – 21
• THA - 14
• No Readmissions / Infections
Benefits

• Eliminate Hospital Stay
• Fewer complications
• Improve Outcomes
• Increase Patient Satisfaction
Summary

- Patient Selection
- Patients Education
- Surgical Procedure
- Pain Management
- Comprehensive Approach
- Perfect Execution
“People say time changes things, but you actually have to change them yourself.”

-Andy Warhol