Hip Surgery and Mobility

Nursing Best Practice Guidelines
Clinical Indications for Hip Surgery

- Selected fractures of the hip
- Unremitting pain and irreversible damaged joint from primary osteoarthritis or rheumatoid arthritis
- Failure of previous reconstructive surgery
- Pathologic fractures from metastatic cancer
- Congenital hip disease
- Joint instability
Types of Hip Procedures: Repair or Replacement

- Look carefully at the x-rays below:
Types of Hip Procedures: Repair/Fixation

- Internal Fixation: Examples of Pinning and ORIF
Types of Hip Procedures: Replacement

Hip Fracture-unrepaired

Types of hip prosthesis
Types of Hip Repair Procedures

- ORIF

Three Screw Fixation

Rod and Screw Fixation
Total hip replacement versus hemiarthroplasty

- A hip hemiarthroplasty is similar to a total hip replacement but only one half of the hip joint is replaced. In a hip hemiarthroplasty the top of the thigh bone (femur) is replaced by a metal implant.
Hints for Nurses: How to tell ORIF from a Hemi without an x-ray….

- Abductor splint in place from OR > hemiarthroplasty
- Length of incision…
  - If a long, single incision >>> hemiarthoplasty
  - If a short or double incision >>> ORIF
- ORIF and hemi are both used for acute hip fractures
- Total hips (total arthroplasty) are generally electively done for hip degeneration
- FYI: An ORIF is less invasive and is initially better tolerated by frail patients.
## ORIF vs Total Hip Precautions

<table>
<thead>
<tr>
<th>ORIF</th>
<th>Total Hip Replacement or Hemiarthroplasty</th>
</tr>
</thead>
<tbody>
<tr>
<td>- No abduction splint needed</td>
<td>- Requires abduction splint</td>
</tr>
<tr>
<td>- Partial weight bearing</td>
<td>- Weight bearing as tolerated/ per MD order</td>
</tr>
<tr>
<td>- Does not require hip precautions</td>
<td>- Full hip precautions up to 8 weeks</td>
</tr>
<tr>
<td>- Rapid mobility and ambulation as tolerated</td>
<td>- Rapid mobility and ambulation as tolerated</td>
</tr>
</tbody>
</table>
Preoperative Best Practices for Elective Total Hip Replacements...

When time or elective surgery allows

- Infections are ruled out or treated prior to surgery
- Discontinuation of anticoagulants or other regular medications as indicated preoperatively
- Preoperative patient teaching
  - (see next slide)
- Anti-embolism stockings are applied or SCD education
- Antimicrobial skin preparations per surgeon order
  - Reduce risk of infection
- Antibiotics are administered as prescribed
  - Ensure therapeutic blood levels during/after surgery
- Cardiovascular, respiratory, renal, and hepatic functions are assessed by ECG and laboratory tests.
- Discharge planning is begun
Preoperative patient teaching

- Postoperative regimen is explained
- Isometric exercises taught
  - Gluteal, quadriceps, foot pumps, etc
- Bed-to-chair transfer shown
  - Within hip flexion limits of no greater than 90° angle
- Ambulatory aid use demonstrated
- Abduction splint introduced to patient

Teaching the patient before surgery sets them up for a more successful recovery by knowing what to expect in regards to postoperative care, equipment, ambulation and precautions.
Hip surgery: “Traumatic” versus “Elective”

- Hip surgery due to a trauma (such as fracture due to a fall or spontaneous fracture due to osteoporosis) is not “elective”

- Elective surgeries are “planned” which allows time for pre-operative teaching

- Most of the hip surgeries seen at MRCH currently are due to emergent trauma.
Considerations and co-morbidities increasing risk of poor outcome

- Age: Age greater than 85 years holds higher risk for morbidity/mortality
- COPD
- Cardiac
- Liver-kidney function
- Reduced incidence for independent ADLs
- Sedentary life style/decreased activity level
- Reduced Nutritional status: osteoporosis
- Reduced neurological state: dementia, stroke, Parkinson’s disease
- Recent unintentional weight loss
Surgery Happens
For All Types of Hip Fractures

**Nursing Care**
- Cough / Deep Breath Q 2
- Stockings & Compression Devices to ↓DVT, Venous Stasis
- Turn q2h, Maintain Leg Abduction
- Circulation & Neuro Status ✓’s of Affected Leg
- Pain Control
- Mobilize ASAP
- ✓ Under Client for Drainage

Complications
- DVT
- Neurovascular Complications (Bleeding, Swelling)
- Pulmonary Complications (Atelectasis)
- Skin Breakdown (Pressure Ulcers)
- Urinary Retention
- Delayed Complications (Infection, Nonunion)

Watch For
- Severe Pain
- Inability to Move Leg
- Shortening & External Rotation of the Leg
Nursing Diagnoses Post-operatively for Hip Repair or Replacement

- Deficient Fluid Volume
  - Risk related to hemorrhage
- Ineffective Breathing Patterns
  - Effects of anesthesia, analgesics, and immobility
- Acute Pain
- Infection
- Impaired Physical Mobility
  - Related to immobilization therapy and pain
- Imbalanced Nutrition
  - Related to blood loss and healing demands
  - Increased protein, calcium and vitamin D needs in diet
Monitoring for Shock and Hemorrhage

- Evaluate BP and pulse rates frequently
- Administer IV fluids and blood products (as ordered)
- Monitor for signs of hemorrhage
  - Orthopedic wounds have a tendency to ooze more than other surgical wounds
    - Anticipate up to 500mL of drainage in the first 24 hours, decreasing to less than 30mL per 8 hours within 48 hours (depending on surgical procedure)
    - Notify physician if drainage is greater than 300mL in the first 8 hours
  - Measure suction drainage: hemovac or woundvac (if used)
  - Report increased wound drainage or steady increase in pain of operative area
Promoting Effective Breathing Patterns

- Monitor respiratory breath and rate frequently
- Change position every 2 hours
- Encourage use of incentive spirometer, coughing and deep breathing exercises
- Auscultate lungs
Monitoring Peripheral Neurovascular status

- Assess status frequently
  - Every 15 minutes to 1 hour while swelling is significant
  - After swelling has subsided, every 2 hours for 24 hours
  - Then every 4 hours or as needed for symptoms

- Establish baseline of functioning for comparative monitoring

- Report any changes status or abnormal findings
Dietary Risk Considerations

- Low levels of Vitamin D and Calcium
- Chronic hyponatremia (low salt)
- Low protein (cachexia)
Postoperative Mobility: Avoiding Hip Joint Dislocation in Patients with Arthroplasty and Hemiarthroplasty and instability

- Avoid acute flexion of hip
  - General standard is no greater than 90° of hip flexion
- Avoid crossing legs
- Avoid hip adduction or internal rotation
- Avoid elevating bed more than 45 degrees

**Signs of dislocation include shortened extremity, increased discomfort, and/or inability to move the joint**
Mobility: Patient Positioning

- After hip arthroplasty (posterior approach)
  - Patient usually positioned supine in bed
  - Affected extremity held in slight abduction by an abduction splint
  - Avoid acute flexion of the hip
  - Bed is positioned no higher than 45-60 degrees
  - Placing the patient in an upright sitting position puts a strain on the joint and dislocation
Promote Early Ambulation

- Ambulation may begin on day of surgery or first postoperative day
  - Supervised by Physical Therapist
- Transfer and ambulation is based on patient’s position and type of prosthesis/procedure
  - Not all patients recover at the same rate. Not all procedures require the same precautions. Adjust based on individual patients’ abilities, procedure guidelines, and per doctor’s order and physical therapist’s directions
- Use caution when moving patient to an upright position
  - Monitor patient for orthostatic hypotension
Mobility: Rolling Patient

- When patient is in bed immediately postoperatively two nurses turn patient onto unoperated side while supporting operated hip securely in an abducted position
  - The entire length of leg is supported by pillows
  - Use pillows to keep the leg abducted
  - Place additional pillows at back for comfort
  - If the bed is equipped, use overhead trapeze to assist with position change

See next slide for video clip....
Mobility: Rolling Patient
Mobility: Using Fracture Bedpan

- Gather needed equipment.
- Instruct the patient to flex the unoperated hip and knee and pull up on the trapeze (if available) to lift the buttocks onto pan.
- Instruct patient NOT to bear down on the operated hip in flexion when getting off of the pan.
- Encourage bed mobility by using an overhead frame/trapeze.

See next slide for video clip....
Placing a patient with a hemiarthroplasty on a fracture pan
An alternative method to place a mobile, alert patient on a fracture pan:
Mobility: Transfer Techniques

- If patient is unable to weight bear
  - Utilize a mechanical lift
  - Assure two staff are present to transfer

- If patient is able to weight bear
  - Insure patient is wearing non-slip footwear
  - Use a gait belt when ever mobile (SITTING, STANDING, TRANSFERRING, WALKING)
  - Assure that chair/commode is of proper height and at right angle to the bed
  - Use wheeled walker/assistive devices as indicated
Mobility: Sitting and Standing

- Adjust for correct commode/chair height
  - 2 inches above knee height
- Assess for orthostatic hypotension
- Instruct patient to pivot and keep weight on unaffected extremity
- Avoid adduction and internal rotation of the operated hip
- Keep the operated hip at an obtuse angle (greater than 90 degrees flexion) and in line with the body
  - To achieve this, extend the operated leg slightly in front of the body with minimal/no weight-bearing and keep the majority of the body weight on the unoperated leg while using the arms for support and stability
Mobility: Transfer Techniques

See next slide for video clip....
Assuring correct chair height
Transferring from bed to chair
Mobility: Gait Training

- Teach patient to advance the walker then advance the operated extremity to the walker
- Permit weight-bearing only as prescribed
- Assist patient with crutches or cane as prescribed

Initial gait training should be performed by physical therapists. The nurses’ job is not to teach the techniques, however, a nurse should be able to recognize incorrect techniques and contraindicated activities and assist the patient in correcting and maintaining safe practices.
Role of the Physical Therapist and the RN in the Post-Operative Hip Surgery Patient

- While the Physical Therapist and the RN share two common responsibilities…
  1. Preventing injury and hip displacement while encouraging early mobility
  2. Educating the patient in their own self-care to promote rapid healing and full capacity

Each has a unique role in caring for the patient with hip surgery. The following slide outlines their distinct responsibilities.
<table>
<thead>
<tr>
<th>Role of RN/ Nurse</th>
<th>Role of Physical Therapist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial assessment for post operative stability and complications</td>
<td>Initial dangling and transfer of patient to sitting position</td>
</tr>
<tr>
<td>Positioning patient in bed post-operatively</td>
<td>Initial training for gait with assistive devices</td>
</tr>
<tr>
<td>Turning patient to prevent skin breakdown</td>
<td>Assessment of safe-hip precaution practices</td>
</tr>
<tr>
<td>Education of the patient pre and post operatively: multi-aspects including diet, pain management, safety precautions, follow-up</td>
<td>Education of the patient pre and post operatively: safety precautions, mobility, exercises</td>
</tr>
</tbody>
</table>
Summation: 
Hip Surgery and Mobility

- Being aware of the type of surgery helps guide level of mobility
- Co-morbidities play a role in increasing risks (and decreasing mobility) for the patient with hip surgery
- PT and Nursing share a joint responsibility in providing high-quality, best practice care.
The End of Part 1: Orthopedics for Nursing Best Practice