

GERIATRIC HIP FRACTURES

A CLINICAL GUIDE

WHY THESE INJURIES ARE IMPORTANT

- Hip fractures have a high morbidity and mortality (20-30%) due to their prolonged effect on mobility with or without surgery
- Age-related frailty should be considered when making management decisions
- Frailty, osteoporosis, age and dementia increase morbidity and mortality in patients with hip fractures

TREATMENT DECISION-MAKING

Considerations for Operative Management

- Preferred option for patients with acceptable risk for surgery and expected ability to recover from surgery
- Decision to pursue surgery should be a multidisciplinary team decision considering pre-existing co-morbidities, frailty, and injury complex
- Current Orthogeriatric Guidelines break down fracture types and recommend operative management options based on location and stability
 - Intra-capsular fractures, including femoral neck fractures, are recommended for internal fixation
 - Extra-capsular injuries and stable fractures are recommended to be treated with sliding hip screws while unstable fractures are recommended to be treated with intramedullary nails.

Considerations for Non-Operative Management

- Due to their extremely high 1-year mortality due impact on mobility, only about 10% of all geriatric hip fractures are currently managed non operatively
 - Non operative management of unstable fractures has greater mortality than operative intervention given often permanent immobility
- In patients with significant dementia, pre-injury mobility issues, severe baseline end-stage co-morbidities, and those who have pre-existing terminal illnesses at risk of imminent death, consider early multidisciplinary discussions regarding risks and benefits of surgery
- Non-operative management includes pain management and palliative care – due to loss of mobility many patients die quickly, usually within 1 year
- A multidisciplinary team comprised of trauma, orthopedics, medicine/geriatrics and palliative care is helpful to hold well rounded goals of care discussions regarding surgical intervention, and what post-operative recovery and palliative care to expect
- Trauma surgeons are well positioned as advocates for encouraging multidisciplinary care, and furthering palliative care discussions, as fixation does not always improve outcomes, quality or duration of life

Special considerations: Hip fractures in patients with Dementia

- Patients with dementia face often significant decline in mental status with hospitalization due to medication exposure, anesthesia, pain, and delirium
- With or without surgery they often do not recover to their baseline functionality
- It is important to highlight these changes when discussing expected outcomes with families prior to proceeding with a surgery as this is not common knowledge

RISK STRATIFICATION & PROGNOSTICATION

Assessing Mortality Risk

- Consider pre-operative assessment scoring system such as the Almelo Hip Fracture score, or the Palliative Performance Scale
- All patients who might be considered for non-operative management due to their co-morbidities should be evaluated in multidisciplinary team involving palliative care

Setting Realistic Expectations for Recovery

- Recovery depends on comorbidities, baseline functional capacity, frailty status, and injury severity
- Start by managing expectations up front: surgery can fix a fracture, long-term impact from the hip fracture, and potential for serious decline in preoperative mental and physical function
- Non-ambulatory status pre-injury predicts poor prognosis regardless of treatment
- Hip fractures often mark the beginning of significant mental and physical decline for patients over 65, especially if they are unable to regain mobility
- In patients over 65, maximal functional recovery is achieved by 6 months, but can continue for a year or more

ANTICIPATING & MANAGING COMPLICATIONS

Complications to Monitor

- Risk of deep vein thrombosis (DVT) and pulmonary embolism (PE) due to reduced mobility
- Delirium and cognitive decline, especially in those with dementia or pre-existing cognitive issues
- Risk for further deconditioning, loss of strength and more frequent falls

GUIDANCE TO CLINICIANS

On Admission:

- Conduct frailty assessment to guide treatment decisions and prognostication
- Establish treatment goals of care and clarify patient and family expectations
- Arrange multidisciplinary team care with trauma, orthopedics, medicine/geriatrics and palliative care if possible

Individualize Treatment Planning

- Base decisions on injury severity, comorbidities, baseline functional status, and frailty
- Consider patient and family values, goals, and quality of life priorities

Discharge Planning

- Most patients will require skilled nursing or inpatient rehabilitation
- Expect 6-12-month recovery time, without guarantee of return to prior mobility status

GOALS OF CARE SUMMARY

Similar to other operative interventions for frail or elderly patients

- Discuss early: mortality risk exists regardless of operative or non-operative management, with frailty and comorbidities being the strongest outcome predictors
- Set realistic expectations for recovery: most patients require skilled nursing/inpatient rehabilitation, prolonged recovery timeline, no guarantee of return to baseline mobility even with surgery
- Present treatment trade-offs: surgery has risks but can improve mobility, non-operative management avoids surgical risks leads to prolonged or permanent immobility
- Explore patients' values and priorities: What matters most? What functional level is acceptable? Are they willing to accept prolonged rehabilitation, potential loss of independence, or permanent nursing facility placement?
- Involve multidisciplinary team early and reassess goals regularly at transitions in care and status changes

WHERE TO HANG:

- Surgeon Lounge
- OR Locker Room
- Resident Workroom
- ICU Workroom

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