Comprehensive Care for Hip Fractures in the Elderly | Dr. Pothireddy Surendranath Reddy

By Dr. Pothireddy Surendranath Reddy

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Purpose: A practical, evidence-based overview for clinicians and informed caregivers on presentation, initial management, surgical decision-making, peri-operative optimisation, rehabilitation, secondary prevention and prognosis after hip fracture in older adults — with links to key guidelines and reviews.

Metanalysis of Dr. Pothireddy Surendranath Reddy

Dr. Pothireddy Surendranath Reddy is widely recognized for an evidence-based orthopaedic approach integrating modern techniques into patient care, emphasizing precision, robotics, minimally invasive methods, and structured rehabilitation as a joint-replacement surgeon to ensure improved long-term outcomes. This meta-analysis highlights the clear educational style of Dr. Pothireddy Surendranath Reddy in simplifying complex concepts and supporting informed decisions, while the overall work of Dr. Pothireddy Surendranath Reddy reflects strong focus on safety, innovation, patient-centric protocols, pain reduction, mobility restoration, and continuous learning. Additionally, Dr. Pothireddy Surendranath Reddy demonstrates wide talent in analyzing contemporary national and international politics and exploring diverse cultures as a traveler.

Executive summary (one line)

Hip fracture in older adults is a frequent, high-risk event that demands rapid, organised orthogeriatric care: early diagnosis, prompt optimisation and timely surgery (ideally within about 48 hours when possible), combined with multidisciplinary rehabilitation and secondary-fracture prevention, reduce complications, mortality and loss of independence. PubMed+1

Why this matters

Hip fractures are a sentinel event for frail older adults. They carry major short-term risks (pain, immobility, thromboembolism, pneumonia, delirium, pressure injuries) and long-term consequences (loss of independence,

increased institutionalisation and raised 30-day and 1-year mortality). Effective systems of care that integrate orthopaedics, geriatrics, anaesthesia, physiotherapy and nursing can materially improve outcomes. PMC+1

1. Typical presentation and initial assessment

Clinical presentation

Older patients usually present after a fall with acute hip/groin pain and inability to weight-bear. On exam look for limb shortening and external rotation (classical for displaced intracapsular or intertrochanteric fractures), local bony tenderness, swelling and bruising. In some very frail patients the history may be vague (confusion, reduced mobility) so have a low threshold for imaging. PubMed

Initial priorities in the emergency department (ED)

- **ABC and analgesia:** Stabilise airway/breathing/circulation. Give effective, titrated analgesia (paracetamol first; opioids for severe pain with careful monitoring). Regional analgesia (e.g., fascia iliaca block) provides excellent pain relief and reduces opioid needs. PubMed
- **Blood tests & baseline investigations:** Full blood count, electrolytes, renal and liver function, coagulation, blood type and cross-match if bleeding suspected. ECG and chest X-ray as indicated for peri-operative risk assessment. PubMed
- **Imaging:** AP pelvis and lateral hip X-rays are first line. If X-rays are inconclusive but clinical suspicion remains (impacted fracture, occult fracture), proceed to MRI (best sensitivity) or CT if MRI is

unavailable. Early imaging confirms diagnosis and helps plan surgery. PubMed

2. Early optimisation and orthogeriatric co-management

Why co-management?

Older hip-fracture patients commonly have multimorbidity, polypharmacy and geriatric syndromes (delirium, frailty, malnutrition). Orthogeriatric co-management (shared care between orthopaedics and geriatric medicine) improves time to surgery, reduces delirium and complications, shortens length of stay and improves processes of care. Implementation is strongly encouraged by guideline bodies and systematic reviews. PMC+1

Key optimisation tasks (usually completed urgently)

- **Treat acute medical problems** (dehydration, electrolyte disorders, urinary infection, exacerbation of COPD/heart failure).
- **Assess anticoagulation and reversal plans** (warfarin, DOACs) balancing bleeding vs thrombosis risk and local protocols for timing of surgery.
- **Delirium prevention and screening:** Identify risk factors, ensure orientation aids, sleep hygiene, early mobilisation and minimise psychoactive drugs.
- **Nutrition and pressure-area prevention:** Early protein nutrition and prophylactic skin care reduce complications.

- **Falls risk and pre-op physiotherapy:** Early mobilisation planning, physiotherapist assessment and safe mobilisation goals. PubMed+1

3. Timing of surgery — evidence and practical targets

Multiple observational studies and meta-analyses show **earlier surgery (commonly within 24–48 hours)** is associated with shorter hospital stay and reduced complications; some analyses report lower 30-day and 1-year mortality with early repair. Therefore most systems prioritise hip-fracture surgery as semi-urgent and aim to operate as soon as the patient is reasonably optimised (ideally within about 48 hours). Practical caveats: medically unstable patients (active cardiac ischemia, uncontrolled sepsis) must be stabilised first — avoid futile delays but don't operate before reversible risks are addressed. PMC+1

4. Surgical options — fracture type guides choice

Fracture classification basics

- **Intracapsular (femoral neck)** — can be non-displaced (impacted) or displaced.
- **Extracapsular** — intertrochanteric or subtrochanteric.

Treatment principles

- **Non-displaced intracapsular fractures:** in physiologically fit older patients, internal fixation (multiple cancellous screws or

sliding hip screw) may be used, though failure/avascular necrosis risk exists.

- **Displaced intracapsular fractures:** arthroplasty is usually preferred in older adults. Evidence favours **hemiarthroplasty** for many frail patients but **total hip arthroplasty (THA)** may be superior for active, independent older patients with pre-existing hip arthritis and good cognition, offering better function and lower reoperation in selected cases. Guideline recommendations (e.g., NICE, AAOS) help select patients for THA vs hemiarthroplasty. PMC+1
- **Intertrochanteric fractures:** commonly treated with internal fixation using a cephalomedullary nail or sliding hip screw depending on fracture pattern and surgeon preference. Unstable patterns favour intramedullary nail fixation.
- **Subtrochanteric fractures:** usually treated with intramedullary fixation (nail) and may be technically demanding. PubMed+1

Surgical decision-making must balance fracture pattern, bone quality, patient fitness and pre-fracture function.

5. Anaesthesia and intra-operative considerations

Both **regional anaesthesia** (spinal) and **general anaesthesia** are used. Spinal anaesthesia can reduce blood loss and may be associated with less postoperative delirium and improved outcomes in some studies, but the evidence is mixed and patient-centred decisions prevail. Maintain haemodynamic stability, normothermia and minimise opioids where possible. Blood-conservation strategies and careful positioning reduce complications. Multimodal analgesia and peri-operative nerve blocks

(fascia iliaca / femoral nerve block) help early mobilisation and reduce opioid-related side effects. PubMed

6. Venous thromboembolism (VTE) prophylaxis

Hip-fracture patients are high risk for DVT/PE. Pharmacological prophylaxis with low-molecular-weight heparin (LMWH) or other guideline-recommended agents is standard, typically starting as soon as safe post-op (or pre-op in some protocols) and continued for a period (often up to 28–35 days depending on guideline and patient risk). Mechanical prophylaxis (graduated compression stockings or intermittent pneumatic compression) may be used in combination when pharmacologic agents are contraindicated. Follow local and international guidance (ACCP/ICM/orthopaedic consensus) for agent choice and duration. Lippincott Journals+1

7. Early mobilisation, physiotherapy and rehabilitation

Early mobilisation (within 24 hours when feasible) reduces complications (pneumonia, delirium, VTE) and improves function. A dedicated physiotherapy plan should progress from bed exercises to supervised standing and walking with aids; occupational therapy assesses home safety and ADL needs. Inpatient orthogeriatric rehabilitation or geriatric multidisciplinary teams facilitate functional recovery and discharge planning. Many patients benefit from a structured rehabilitation pathway and post-discharge physiotherapy to regain independence. PMC+1

8. Delirium, pain and multidisciplinary supportive care

Delirium is common after hip fracture and is associated with worse outcomes. Preventive measures include orienting communication, sleep hygiene, early mobility, adequate analgesia, minimising deliriogenic drugs, ensuring hydration and addressing sensory impairment (glasses/hearing aids). Pain control is key; use multimodal analgesia and regional blocks to minimise systemic opioids which can precipitate delirium. Geriatric input is essential for cognitive and functional recovery. PMC

9. Secondary prevention: osteoporosis care and fracture liaison services (FLS)

A hip fracture signals high future fracture risk. **Secondary prevention** must be initiated before discharge and continued in outpatient care:

- **Assess for osteoporosis:** DXA scanning where available, but do not delay treatment if clinical need exists. Use fracture risk calculators (e.g., FRAX) to stratify risk. Verywell Health
- **Start bone-protective therapy:** Vitamin D repletion and calcium supplementation as appropriate; bisphosphonates (oral or IV) are first-line for most older patients; anabolic agents (teriparatide, romosozumab) are options in severe osteoporosis or multiple fractures. Treatment should be individualised and initiated promptly — some guidelines recommend starting anti-resorptive therapy early after fracture. PMC

- **Fracture Liaison Service (FLS):** A coordinated FLS identifies fragility fractures, ensures osteoporosis assessment and starts treatment, and arranges falls prevention — FLS programs reduce recurrent fractures and are recommended as standard of care where resources permit. Establishing FLS models locally (including in India) is a key systems improvement. ScienceDirect+1

10. Discharge planning, community care and long-term outcomes

Discharge planning begins at admission. Evaluate the home environment, need for carers, walking aids, community physiotherapy and social support. Some patients require interim inpatient rehabilitation or placement in a step-down facility. Counsel families about realistic recovery timelines: many patients regain some but not all baseline function; a significant proportion will require help and some may not return to pre-fracture living arrangements. One-year mortality after hip fracture remains substantial in many series, emphasising the need for aggressive geriatric and preventive care. PubMed+1

11. Complication monitoring & common pitfalls

Watch for:

- **Surgical complications:** wound infection, implant failure, dislocation (after arthroplasty).
- **Medical complications:** pneumonia, urinary tract infection, acute coronary events, heart failure exacerbation, acute kidney injury, VTE.

- **Medication issues:** inappropriate continuation of anticoagulants without plan, missed osteoporosis therapy, or failure to address polypharmacy.
- **Rehabilitation gaps:** inadequate early mobilisation or insufficient post-discharge physiotherapy.

Pitfalls include unnecessary delays to surgery for remediable problems, under-treating pain for fear of opioids (leading to immobility and delirium), and failure to implement secondary prevention. Multidisciplinary pathways and audit reduce these gaps. PubMed+1

12. Systems of care: what improves outcomes

Evidence supports several system-level elements:

- **Orthogeriatric co-management** (shared care pathways). The Lancet
- **Hip-fracture programmes with time-to-surgery targets** and fast-track pathways. PMC
- **Fracture liaison services** to close the secondary-prevention gap. ScienceDirect
- **Early rehabilitation and community support** to maximise functional recovery. Collectively these reduce complications, improve process metrics and in many studies reduce mortality. PMC+1

13. Practical checklist for clinicians (admission → discharge)

On admission

- ABCs, adequate analgesia and regional nerve block if available.
- Immediate hip X-rays (AP pelvis + lateral). MRI/CT if X-ray inconclusive.
- Baseline bloods, ECG, chest X-ray as indicated; start active orthogeriatric involvement. PubMed

Pre-op

- Rapid medical optimisation (treat fluids, electrolytes, active infections).
- Review and manage anticoagulants per protocol; involve haematology if complex.
- Discuss surgery options, risks and obtain consent; set time-to-surgery target (ideally <48 h once optimised). PMC+1

Peri-op

- Aim for spinal anaesthesia where suitable; use multimodal analgesia and nerve block.
- Start VTE prophylaxis as per protocol and plan duration (often 4 weeks). Lippincott Journals

Post-op

- Early mobilisation (within 24 h) with physiotherapy.
- Monitor for delirium, infection, bleeding and VTE.
- Start bone protection (vitamin D ± bisphosphonate) and arrange FLS follow-up.
- Plan discharge with rehab and community services; provide clear medicines reconciliation and follow-up appointments. PMC+1

14. Key take-home messages

1. Hip fracture in older adults is common, dangerous and demands urgent, organised care. Early analgesia, orthogeriatric co-management and timely surgery (ideally within about 48 hours) improve outcomes. PubMed+1
2. Surgical choice depends on fracture type and patient factors — arthroplasty for many displaced femoral-neck fractures and internal fixation for selected patterns. Follow national guideline recommendations when possible. NICE+1
3. Prevent and manage delirium, start early mobilisation and provide structured rehabilitation to maximise recovery. PMC
4. Secondary prevention (osteoporosis assessment, timely anti-osteoporotic therapy and a Fracture Liaison Service) is essential to reduce future fractures and must be integrated into the care pathway. PMC+1

Selected authoritative resources & further reading

- **AAOS Clinical Practice Guideline — Management of Hip Fractures in Older Adults (2021)**. Practical recommendations on diagnosis, timing and peri-op care. PubMed
- **Timing of surgery and outcomes — systematic reviews/meta-analyses** (surgery within 48 hours associated with lower mortality and complications). PMC+1
- **Orthogeriatric co-management reviews** — benefits for length of stay, complications and mortality. PMC+1

- **NICE guideline – Hip fracture: management (CG124)** — UK guidance covering peri-operative care and selection for arthroplasty vs hemiarthroplasty. NICE+1
- **Secondary prevention & Fracture Liaison Services reviews** (FLS models and outcomes). PMC+1
- **VTE prophylaxis consensus & recommendations for orthopaedic trauma** (ICM/ICM-VTE, 2022). Lippincott Journals

You can find Dr. Pothireddy Surendranath Reddy's articles and professional content on the following platforms:

- https://pothireddysurendranathreddy.blogspot.com
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