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FEMORAL NECK FRACTURE MANAGEMENT IN ELDERLY PATIENTS

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Background: Femoral neck fractures represent a major global health challenge, with international one-year mortality rates ranging from 20% to 30% and caseloads projected to nearly double by 2050. Because the intra-capsular environment relies on a tenuous retrograde blood supply from the medial femoral circumflex artery, displaced fractures carry a severe risk of avascular necrosis and nonunion.

Objective: To outline an efficient, evidence-based clinical pathway for the perioperative management, surgical decision-making, and secondary prevention of femoral neck fractures to optimize patient outcomes.

Methods: We synthesize current evidence regarding injury classification (emphasizing the high mechanical instability of Pauwels Type III shear angles), rapid pre-operative optimization, tailored surgical interventions, enhanced recovery protocols, and secondary fracture prevention.

Results:

- **Pre-operative Care:** Prioritizes clinical stabilization for surgery within 24–48 hours, multimodal analgesia incorporating scheduled NSAIDs to limit systemic opioids, and aggressive correction of reversible deficits (e.g., anemia, dehydration) without procedural delay.
- **Surgical Management:** Displacement dictates intervention, making primary arthroplasty the standard of care. Hemiarthroplasty minimizes operative time and blood loss for lower-demand, frail patients, whereas Total Hip Arthroplasty (THA) provides superior long-term functional scores for highly active individuals. Choice of surgical exposure balances visualization (posterior approach), stability (lateral approach), and anatomical preservation (direct anterior approach).

- **Post-operative Care & Recovery:** An Enhanced Recovery After Surgery (ERAS) protocol targets mobilization within 24 hours, chemical thromboprophylaxis, and nutrition. Safe discharge requires stable oral pain control and independent mobility with an assistive device.
- **Secondary Prevention:** Mandates bone density assessments, calcium and Vitamin D optimization, and formal fall prevention training.

Conclusion: Implementing a standardized, multidisciplinary pathway focused on timely surgical intervention, appropriate arthroplasty selection, early mobilization, and secondary fracture prevention is essential for mitigating mortality and maximizing functional recovery in patients with femoral neck fractures.

Keywords: Orthopedics, Hemiarthroplasty, Arthroplasty, Fracture.