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How Late Is Too Late? The Slow Fracture in Our Hip-Fracture Timelines

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Dear Editor,

The question of how quickly a hip fracture should be fixed and whether antithrombotic therapy should delay it remains one of the more contested areas of perioperative practice, and one where anaesthetists sit at the centre of the decision. Hip fractures in older adults represent one of the most formidable clinical and societal challenges in modern healthcare. With global projections indicating a staggering rise from 2.2 million cases in 2017 to 4.5 million by 2050, these injuries are far more than orthopaedic emergencies — they are life-altering events for a frail, elderly demographic. Typically burdened with multiple medical comorbidities and polypharmacy, over half of these patients fall into ASA physical status 3 or 4. I write to summarise where the current evidence and major society guidance stand, and to highlight the lacunae that continue to make this a genuinely difficult bedside judgement rather than a solved problem.

The largest and most recent synthesis, a 2026 meta-analysis and trial sequential analysis of over 3.3 million patients, confirms that surgery beyond 24 hours carries significantly higher in-hospital and 3-month mortality, along with more cardiovascular

complications, delirium and stroke, though the marginal benefit of operating before 12 hours appears uncertain[1]. Society guidance broadly agrees on the principle of urgency but not on the number: AAOS (USA) endorses 24–48 hours[2], the UK NHS Best Practice Tariff audits against 36 hours, and Germany's newly revised S3 guideline (2026) explicitly declines to endorse 24 hours over 48 hours, citing very-low-certainty evidence for either cut-off[3]. International consensus reflected across guidelines from the Fragility Fracture Network (FFN), the Association of Anaesthetists, and all major national bodies converge on a clear mandate: surgery should be performed within 48 hours, and ideally within 24–36 hours, unless the patient faces imminent death or specific, reversible physiological crises.

Beyond survival, timely fixation dictates functional recovery. Recent propensity-matched data from Kawakami et al. highlight that patients operated on within 48 hours achieve significantly better postoperative mobility and Functional Independence Measure (FIM) scores at discharge, particularly those with pre-existing mobility limitations[4]. Early intervention facilitates rapid mobilization, which dramatically curtails devastating complications such

as delirium, pressure sores, urinary tract infections, hypostatic pneumonia, and thromboembolic events (DVT and pulmonary embolism). Conversely, leaving a frail patient immobilized in bed for days awaiting unnecessary cardiac or pulmonary clearances invites rapid physical deconditioning and heightened morbidity.

A frequent pitfall in clinical pathways is unwarranted delay for minor or manageable abnormalities. Established guidelines clearly delineate acceptable reasons for delay—such as acute severe cardiac arrhythmias, decompensated heart failure, severe electrolyte disturbances, active sepsis from chest infection, or correctable coagulopathy. Conversely, chronic stable conditions, mild-to-moderate pulmonary disease, and controlled or stable diabetes should not stall the operating room schedule. Crucially, regarding antiplatelet therapy, single antiplatelet agents like clopidogrel should ideally not be withheld throughout the perioperative period due to the documented surge in acute coronary syndromes (ACS) upon withdrawal, as underscored by Collyer et al. and recent systematic reviews[5]. Spinal anaesthesia can safely proceed in patients on single antiplatelet therapy and specialized protocols exist for vitamin K antagonists and direct oral anticoagulants (DOACs) to avoid multi-day holding periods. For DOACs specifically, the last two years of cohort data and meta-analyses (Kyaw and Khin, 2025; Spitler and colleagues' OTA survey, 2025) point the same way: early surgery does not clearly raise mortality, transfusion, or thromboembolic risk. And yet the same survey found that when surgeons do delay electively, it is disproportionately the DOAC patients they delay — not because the evidence demands it, but because the habit is comfortable and nobody wants to be the one who didn't wait.

Where I think anaesthetist genuinely add something

the orthopaedic timing debate misses is the second layer underneath it — whether a spinal is safe, which is not the same question as whether surgery is safe. ASRA's fifth edition guidelines, published in January 2025, moved away from blanket time cut-offs toward drug-level and dose-stratified thresholds[6], and those thresholds are frequently longer than what the surgical or haematology literature would allow for the operation itself. A patient can be "cleared" for theatre by one set of criteria and still sit outside the recommended window for a needle in their back by another. Mitchell and colleagues' 2024 international consensus statement is the first serious attempt I have seen to reconcile the two rather than let each specialty quietly work to its own clock[7]. Reassuringly, the largest dedicated incidence study to date — 96,103 consecutive neuraxial anaesthetics for hip and knee arthroplasty — found epidural haematoma occurred exclusively with indwelling epidural catheters and not with single-shot spinal anaesthesia, an important and practical distinction for hip fracture practice[8]. Equally, guideline non-adherence, rather than the antithrombotic agent itself, has emerged as an independent driver of poor neurological outcome when spinal epidural haematoma does occur — reframing the safety question from "is the drug too risky" to "is the guideline being followed." Moreover the two recent landmark, multicentre RCTs—the REGAIN (Regional versus GA for promoting Independence after Hip fracture) and RAGA (Regional versus GA for Post op delirium) trials independently proved non-inferiority between primary regional and general anaesthesia for standard outcomes in older hip fracture patients.

As anaesthesiologists and perioperative physicians, our role extends far beyond the operating room. We must actively dismantle organizational bottlenecks—such as limited operating room availability and round-the-clock staffing deficits by

formulating structured hip fracture pathways. The four key pillars of anaesthetic care must guide our approach: Prehabilitation, Remobilisation, Re-enablement, and Rehabilitation. By utilizing age-appropriate lower-dose spinal anaesthesia, supplemental nerve blocks, meticulous intraoperative blood pressure maintenance within 20% of baseline, and close collaboration with geriatricians, we can transform outcomes. With the upcoming Silver tsunami of aged population across the world, it is time to move past reflexive delays and embrace accelerated surgical care, ensuring our elderly patients receive the prompt, compassionate intervention and care they deserve.

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