EDITORIALS

Total hip arthroplasty after hip fracture

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Practice is inconsistent and inequitable

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Outcomes for patients with osteoporotic hip fracture are poor and have been for decades.¹ Patients are still left with persistently high rates of morbidity, mortality, decline in function, and loss of independence.^{2,3} Attempts to improve outcomes have led to evolving approaches to treatment. In older adults, internal fixation for displaced intracapsular hip fractures has largely been supplanted by hemiarthroplasty (or “partial” hip replacement), which is associated with lower rates of revision surgery and better overall outcomes.⁴ More recently, in this population there has been a push to increase the use of total hip arthroplasty (THA)—an intervention used more commonly for arthritis of the hip—because of the potential for a better return to functional mobility and, therefore, independence.⁵

In a linked study, Perry and colleagues (doi:10.1136/bmj.i2021) analyzed data from the UK’s National Hip Fracture Database to determine compliance with guidelines for THA from the National Institute for Health and Care Excellence (NICE) and to identify predictors of use of THA.⁶ Their large observational study included 114 119 adults aged 60 or over with displaced intracapsular fractures of the femoral neck. NICE recommends THA for those with good cognitive and physical function who are fit enough for anesthesia and surgery. The degree of non-adherence to this guidance was remarkable: only 32% of ostensibly eligible adults received THA, and, of those who underwent the procedure, 42% did not meet the NICE eligibility criteria.

Practice varied substantially across the UK. The authors identified several variables that increased the odds of receipt of THA after fracture, including younger age, fewer co-morbid conditions, and better mobility before fracture. More striking, however, were the findings that being admitted on a weekday or being of a higher socioeconomic status increased the odds that a patient would receive a THA.

Why is there such widespread non-compliance with the NICE guidelines? The answer could lie in the current dearth of conclusive evidence that THA is definitively better than hemiarthroplasty for adults with a displaced intracapsular hip fracture and a lack of consensus among orthopedic surgeons about best practice. Although there is some early evidence that

patients function better after THA, these studies have notable limitations including small sample sizes and a lack of adequate blinding.⁷

Furthermore, THA carries higher risks than hemiarthroplasty, such as greater intraoperative blood loss, longer operative times, and more postoperative complications. One meta-analysis of randomized controlled trials of hemiarthroplasty compared with THA for displaced intracapsular hip fractures reported a significantly higher risk of postoperative hip dislocation after THA.⁷ These are important considerations in patients who are often frail and have multiple co-morbidities. A large multinational randomized controlled trial comparing the two treatment options is currently underway and could help to resolve this ongoing debate.⁸

Despite a lack of consensus, the authors’ finding that type of treatment varies by geography, socioeconomic status, and day of the week is disconcerting. This is precisely why we need strong evidence to guide treatment decisions. In the absence of strong evidence, biases—whether personal or systemic—are more likely to skew clinical decision making in a manner that is unjust and ultimately harmful for patients.

We urgently need evidence based indications for THA, but if the findings of Perry and colleagues on guideline adherence can be generalized, even the most convincing randomized controlled trial might not be enough to harmonize practice. A concerted strategy to translate knowledge will be required, combining dissemination of evidence based indications for THA with widespread mobilization and availability of specialized resources and personnel.

Decades of stagnant outcomes indicate that there might never be a “silver bullet” intervention to improve the lives of patients with hip fracture. Accumulating evidence suggests that multiple coordinated interventions—which, arguably, can be implemented only through a system level approach—are the answer to poor patient outcomes. For instance, collaborative models sharing care between orthopedic surgeons and geriatricians, multicomponent perioperative interventions, and very early surgery have all been shown to improve outcomes.⁹⁻¹¹ The momentum of accumulating evidence has prompted some

experts to call for specialized hip fracture teams or even regional centres of excellence.^{6 12}

Not all orthopedic trauma surgeons are comfortable performing THA, and evidence of superiority of THA will only consolidate further arguments for a change in the way hip fracture care is organized. As Perry and colleagues have shown, treatment is far too variable in the current system. We need both evidence and models of care that facilitate standardization of hip fracture care nationally (and globally), ultimately rooting out biases in the system and improving the lives of patients after hip fracture.

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