Paper Session: RCT and Other
Prospective Studies II

Acetabular Fractures in Older Patients Intervention Trial (AceFIT)

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Purpose: Displaced acetabular fractures in the older patient present significant treatment challenges. There is evidence that the morbidity and mortality associated with these injuries is similar to the fractured neck of femur cohort, often associated with poorer outcomes. Despite growing literature in this patient population, there remains significant controversy regarding treatment algorithms, varying from conservative management, to fracture fixation, and finally "fix and replace" surgical strategies to allow immediate full weight-bearing.

Methods: NHS (National Health Service) funding was secured from National Institute for Health Research (NIHR), Research for Patient Benefit and trial ethical approval granted from East of England Research Ethics Committee. After national consultation, 3 trial arms were included: conservative management, fracture fixation, and simultaneous fracture fixation with total hip arthroplasty (THA). Statistical analysis required a minimum of 12 patients in each of the 3 arms to show feasibility, with an optimum trial recruitment of 20 in each arm. Inclusion criteria included patients >60 years of age with a displaced acetabular fracture with the following exclusion criteria: open fracture, THA in situ, preinjury immobility, and polytrauma. Primary outcome measure was ability to recruit with EuroQol-5 Dimensions-5 Levels (EQ-5D-5L) at 6 months. Secondary outcome measures at 9 months included Oxford Hip Score, Disability Rating Index, radiographic evaluation, perioperative physiological variables including surgery duration, blood loss, and complications, and health economics.

Results: 11 UK Level-I major trauma centers were enrolled into the trial, which commenced in a staged manner from December 2017. Full trial recruitment of 60 patients was achieved in December 2019. 496 patients were screened: 379 not eligible and 57 declining participation. 66% of patients recruited were male, median age 76 years (range, 63-93), median body mass index (BMI) 25 (range, 18-37), 87% of patients had full mental capacity and 77% were admitted from own home. 75% of injuries were due to a fall from standing height and 60% of fractures were classified as anterior column posterior hemitransverse. Full data acquisition will be complete by September 2020. NIHR has authorized AceFIT preliminary dataset presentation at the OTA 2020 Annual Meeting.

Conclusion: This unique randomized controlled trial (RCT) feasibility study represents the first opportunity to understand the intricacies of each of these agreed treatment modalities, including patient-reported outcomes and health economics. he primary outcome measure is likely to show feasibility for a fully powered RCT that will need multinational input. Our RCT was required to inform the necessary design and sample size calculation. The definitive anticipated RCT will provide clinicians with information on how best to provide a holistic management strategy for this medically complex patient cohort.