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Paper 139

Causes of Early Hip Revision Vary by Age and Sex: Analysis of Data From a Statewide Quality Registry

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INTRODUCTION: While THA is extremely successful, early failures do occur. The purpose of this study was to determine the cause of revision in specific patient demographic groups at three timepoints to improve quality. The data should guide treatment regimens and implant choice.

METHODS: Data for cases performed between 2012 and 2018 from a statewide, quality improvement arthroplasty registry was used. The database included 79,205 THA cases and 1,433 revisions with identified etiology (1,584 total). All revisions performed at < 5 years from the primary THA were reviewed. Six groups: men/women, <65, 65-75, and >75 years, were compared at revision timepoints <6 mo, <1 year, and <5 years.

RESULTS: There were obvious and significant differences between subgroups based on demographics and timepoints ($p < .0001$). The most common etiologies within 1 year (961 revisions) were: fracture (324, 33.7%), dislocation (235, 24.5%) and infection (164, 17.0%). 756 (78%) of the 1-year revisions occurred within 6 months, the vast majority within 6 weeks. At this early timepoint, the most common revision cause was fracture for all groups and ages (316, 42%) ranging from 27.6% in young men to 60% in older women. Joint instability became the leading cause for revision after 6 months in younger women whereas for younger men infection became the primary issue. The most striking finding was the incidence of fracture as the leading cause of revision at all time points for both men and women >75 years.

CONCLUSION: This quality project demonstrated clinically significant differences in the reason for THA revision between gender, age, and time from surgery. Strategies based on these data should be employed to minimize the factors that to lead to revision. For example, cementing stems to avoid fractures in older patients and maximizing joint stability via technique or implant in younger women.