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Essential Tremor is Associated with Longer Hospital Length of Stay and Greater Risk of Institutional Discharge in Patients Undergoing Total Joint Arthroplasty

Introduction

Essential Tremor is a prevalent condition in the elderly population and is associated with a higher fall risk that can subsequently lead to physical injury. This is especially relevant when older patients have other comorbidities such as muscular atrophy and osteoporosis. Given the elevated risk of falls and injury, it's postulated that these patients would have greater rates of orthopedic surgery. In this study, we analyzed surgical outcomes for patients with Essential Tremor undergoing a total joint arthroplasty.

Methods

A retrospective cohort study was performed using the National Readmissions Database between 2009-2019. All patients undergoing a total hip arthroplasty or a total knee arthroplasty during this period were included and classified based on the presence of underlying Essential Tremor. Important demographic information (Age, Gender, BMI, Charlson Comorbidity Index, Osteoporosis/Arthritis diagnosis, Smoking History, Insurance status, Hospital Characteristics) was accessed for the two groups. Multivariable logistic regression was done for various outcome measurements (length of stay, in-hospital mortality, institutional discharge, medical/post-op complications, readmission, and reoperation).

Results

Patients with Essential Tremor tended to have an advanced age ($p < 0.001$), higher Charlson comorbidity indices ($p < 0.001$), as well as history of osteoporosis ($p < 0.001$). A multivariable regression analysis found that essential tremor was independently associated with a prolonged hospital length of stay (OR 1.326, 95%CI 1.261 to 1.395, $p < 0.001$) and risk for institutional disposition (OR 1.211, 95% CI 1.156 to 1.268, $p < 0.001$).

Conclusion

Essential Tremor was independently associated with increased hospital length of stay and institutional discharge without significantly elevated medical/post-op complications. This investigation lays the groundwork for medical optimization for patients with Essential Tremor receiving a orthopedic procedure.