

1-2020

Falls and Traumatic Brain Injury in the Elderly on Aspirin or Anticoagulant Therapy

Jonathan Bassig

Thomas Jefferson University, jonathan.bassig@jefferson.edu

David Nauheim

Thomas Jefferson University, david.nauheim@jefferson.edu

Stanton Miller

Thomas Jefferson University, stanton.miller@jefferson.edu


Patricia Williams

Thomas Jefferson University, patricia.williams@jefferson.edu

Tingting Zhan

Follow this and additional works at: https://jdc.jefferson.edu/si_ctr_2022_phase1

Thomas Jefferson University, tingting.zhan@jefferson.edu

 Part of the [Geriatrics Commons](#), [Neurology Commons](#), and the [Translational Medical Research Commons](#)

[Let us know how access to this document benefits you](#)

Recommended Citation

Bassig, Jonathan; Nauheim, David; Miller, Stanton; Williams, Patricia; and Zhan, Tingting, "Falls and Traumatic Brain Injury in the Elderly on Aspirin or Anticoagulant Therapy" (2020). *Phase 1*. Paper 97.

https://jdc.jefferson.edu/si_ctr_2022_phase1/97

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Phase 1 by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

SI/CTR Abstract

Word count: 250 words

Falls and Traumatic Brain Injury in the Elderly on Aspirin or Anticoagulant Therapy

Jonathan Bassig, David Nauheim, Stanton Miller*, Patricia Williams, Tingting Zhan

Introduction: Traumatic brain injury (TBI) after a fall in individuals aged 65 and older is a leading cause of morbidity and mortality, but the effect of aspirin and anticoagulant therapy on TBI severity is not fully understood. This study evaluated whether the severity of TBI is associated with use of aspirin or anticoagulant therapy or in combination.

Methods: Using retrospective chart review, we identified patients age 65 or older who fell and sustained head trauma that were admitted to Thomas Jefferson University Hospital trauma service from 2017-2018. Based on final diagnosis, patients were classified into three groups of TBI in order of increasing severity: mild TBI, extra-axial hemorrhage, and intra-axial hemorrhage. ANOVA and regression analysis will be used to compare use of aspirin, anticoagulant therapy, both in combination, or neither in the three groups.

Results: We hypothesize that patients with more severe head trauma will have increased use of aspirin or anticoagulant therapy or both in combination compared to patients who are on neither aspirin nor anticoagulant therapy. Preliminary results show patients with any diagnosis of TBI were more likely to be on aspirin compared to controls (OR 1.74, $p < 0.001$). Patients with any diagnosis of TBI and anticoagulant

therapy had no statistical significant association compared to controls (OR 1.25, $p=0.25$).

Discussion: These findings will guide the understanding of how aspirin and anticoagulant therapy affect severity of TBI. Judicious use of aspirin and anticoagulant therapy in the elderly who are at risk of falling may reduce the incidence of severe TBI.