Anticoagulation Resumption after traumatic brain injury

- Anticoagulation Holiday: Resumption of Direct Oral Anticoagulants for Atrial Fibrillation in Patients with Index Traumatic Intracranial Hemorrhage
- Effect of Antithrombotic Drugs Reversal on Geriatric Traumatic Brain Injury
- Safest Time to Resume Oral Anticoagulation in Patients with Traumatic Brain Injury
- Evaluation of a protocol for early detection of delayed brain hemorrhage in head injured patients on warfarin
- Resumption of oral anticoagulation following traumatic injury and risk of stroke and bleeding in patients with atrial fibrillation: a nationwide cohort study
- Benefits and risks of anticoagulation resumption following traumatic brain injury

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The optimal time to restart direct oral anticoagulants (DOACs) for nonvalvular atrial fibrillation (NVAF) after traumatic intracranial hemorrhage (tICH) is unknown. Physicians must weigh the risk of recurrent hemorrhage against ischemic stroke [1)]

There is no standard protocol to guide the optimal time to resume anti-clotting agents after traumatic brain injury (TBI) in patients with a continued indication for anticoagulation/antiplatelet therapy (AAT). This study develops baseline data supporting a future prospective cohort study. We predict that there will be significantly decreased adverse events when AAT is started on or after Day 7.

METHODS: A retrospective chart review of 256 patients was performed. Patients admitted to a level I trauma center in West Texas between January 1, 2009, and December 31, 2012, on anti-clotting agents (specifically acetylsalicylic acid, coumadin, and/or clopidogrel) and who suffered a TBI were included. Patient metrics included admission coagulation studies, type of TBI and treatment, and time to continuation of AAT. Outcomes were assessed using follow-up appointment data. The primary outcome was death (mortality). Secondary outcomes included myocardial infarction, stroke, re-bleed, venous thromboembolism, and pneumonia.

RESULTS: A total of 256 patients met the inclusion criteria. However, only 85 patients on AAT presented for the six-month follow-up. Time to AAT resumption varied from immediate to 31 days. Out of the 85 patients, 32 patients never resumed AAT, 32 patients were restarted on AAT medication in less than seven days, 10 patients restarted medication between seven and 14 days, and 11 patients restarted AAT in more than 14 days. Adverse events occurred most infrequently in the AAT group resuming therapy between seven and 14 days (10%). Adverse events were most prevalent in the AAT group that never resumed therapy (68.8%).

CONCLUSION: While most studies suggest that the safest time for resuming AAT lies between three and 10 days, our study revealed that adverse events were minimized in patients on AAT between seven and 9.5 days [2)].

The aim of study was to describe current approaches and to quantify variability between European

intensive care units (ICU)s in patients with traumatic brain injury (TBI). Therefore, Huijben et al. conducted a provider profiling survey as part of the 'Collaborative European NeuroTrauma Effectiveness Research in Traumatic Brain Injury' (CENTER-TBI) study. The ICU Questionnaire was sent to 68 centers from 20 countries across Europe and Israel. For this study, they used ICU questions focused on 1) hemoglobin target level (Hb-TL), 2) coagulation management, and 3) deep venous thrombosis (DVT) prophylaxis. Sixty-six centers completed the ICU questionnaire. For ICU-patients, half of the centers (N= 34; 52%) had a defined Hb-TL in their protocol. For patients with TBI, 26 centers (41%) indicated a Hb-TL between 70 and 90 g/l and 38 centers (59%) above 90 g/l. To treat trauma related hemostatic abnormalities the use of fresh frozen plasma (N= 48; 73%) or platelets (N= 34; 52%) was most often reported, followed by the supplementation of vitamin K (N= 26; 39%). Most centers reported using DVT prophylaxis with anticoagulants frequently or always (N= 62; 94%). In the absence of hemorrhagic brain lesions, 14 centers (21%) delayed DVT prophylaxis until 72 hours after trauma. If hemorrhagic brain lesions were present, the number of centers delaying DVT prophylaxis for 72 hours increased to 29 (46%). Overall, a lack of consensus exists between European ICUs on blood transfusion and coagulation management. The results provide a baseline for the CENTER-TBI study and the large between-center variation indicates multiple opportunities for comparative effectiveness research [3].

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2)

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3)

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