

Anticoagulation, Reversal, And Hemostasis In Neurosurgery With Special Emphasis On Neuro-Trauma Patients

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Abstract:

Neurosurgical patients currently taking anticoagulation at the time of presentation, elective or emergent, are increasingly common. An understanding of the mechanisms of action of these drugs as well as techniques to reverse their effects is essential to appropriate and timely care. Vitamin K antagonists, unfractionated heparin and its derivatives, factor X inhibitors and direct thrombin inhibitors all pose unique challenges in managing a neurosurgical patient with comorbid conditions. As all these drugs can present with intracranial hemorrhage, in trauma as well as other types of patients, and emergency management may be needed, knowledge of how and when to rapidly reverse them as best as possible can be life saving. This presentation reviews current pharmacology of anticoagulant actions and reversal agents, as well as the need for DVT/PE screening and prophylaxis, and strategies for perioperative reversal and reinstatement of anticoagulant therapy.

Key Words: Anticoagulation, intracranial hemorrhage, trauma, Coumadin, neurosurgery, Factor-X-Inhibitors, Thrombin-Inhibitors