Venous thromboembolism treatment

- Postoperative Initiation of Thromboprophylaxis in patients with Cushing's Disease (PIT-CD): a randomized controlled trial
- Long-term clinical outcomes of bevacizumab for treatment of stereotactic radiosurgery-induced radiation necrosis in patients with brain metastases
- Balancing safety and efficacy: Assessment of a weight-based, anti-Xa-guided enoxaparin venous thromboembolism prophylaxis dosing strategy for traumatic brain injury patients
- Symptomatic venous thromboembolism after transsphenoidal surgery in Cushing's disease: incidence and risk factors
- Evaluating the efficacy and safety of low-molecular weight heparin as a chemoprophylactic agent in stable traumatic brain injury
- Association of coagulation-related indicators with postoperative venous thromboembolism occurrence in patients with pituitary tumors
- Validating Khorana Risk Score in gastric cancer patients on immune checkpoint inhibitors and chemotherapy
- Intermittent compression devices as antithrombotic strategy in neurosurgical interventions: a prospective randomized controlled trial (Trial In Prevention of Post-Operative ThromboEmbolic Events)

Treatment of venous and arterial thrombotic phenomena represents a major medical challenge, and the development of anticoagulant drugs represents a revolution in medicine.

Non vitamin K oral anticoagulant have been shown to be effective in the prevention and treatment of VTE and in the prevention of stroke and systemic embolism in patients with non-valvular atrial fibrillation (NVAF) [1) 2)].

There is no consensus guideline for initiating anticoagulation in patients with a traumatic or vascular brain injury. Initiating anticoagulation for the management of venous thromboembolism (VTE) can vary significantly from 72 hours to 30 weeks due to the risk of hemorrhagic complications. The purpose of this study is to compare clinical outcomes using a modified Rankin Score (mRS) in a patient population with early (≤ 3 days) versus late (> 3 days) initiation of therapeutic anticoagulation from the time VTE was diagnosed. This retrospective study included patients with a traumatic or vascular brain injury who developed either deep vein thrombosis (DVT) or pulmonary embolism (PE). Use of anticoagulation prior to admission, diagnosis with VTE on admission, or patients with a non-brain injury were exclusion criteria. Secondary outcomes measured were all-cause mortality, length of stay, and reasons for early interruption of anticoagulation. Therapeutic anticoagulation was started early in 76 (74%) patients compared to late initiation in 27 (26%) patients. Baseline characteristics were similar between the two groups. The mRS score 0-3 versus 4-6 was similar in patients who received early anticoagulation versus those who received it later. However, there was a trend favoring better outcomes in the early group [mRS 4-6; 78% vs. 93%; p = 0.085] and in a subgroup analysis of patients with VTE diagnosed 4-7 days [mRS 4-6; 26% vs. 56%; p = 0.006] compared to the late group. In univariate and multivariable logistic regression, only age was associated with a significantly worse outcome (median, IQR) 36 years (24-50) vs. 58 years (44-65) OR

1.07 (1.03-1.12); p < 0.001. In this study, early initiation of anticoagulation did not worsen clinical outcomes [3]

1)
Holy EW, Beer JH. Update on the status of new oral anticoagulants for stroke prevention in patients with atrial fibrillation. Cardiovasc Med. 2013;16:103–114.
2)
Heidbuchel H, Verhamme P, Alings M, et al. European Heart Rhythm Association Practical Guide on the use of new oral anticoagulants in patients with non-valvular atrial fibrillation. Europace. 2013;15(5):625–651.
3)
Samuel S, Menchaca C, Gusdon AM. Timing of anticoagulation for venous thromboembolism after recent traumatic and vascular brain Injury. J Thromb Thrombolysis. 2022 Dec 7. doi: 10.1007/s11239-022-02745-y. Epub ahead of print. PMID: 36479671.