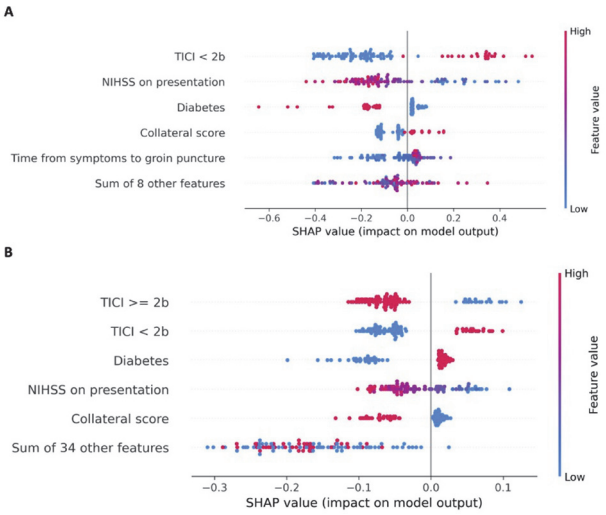

Abstract O-027 Figure 1 SHapley Additive exPlanations (SHAP) scores for the LightGBM (A) and Random Forest (B) models. For continuous features, red and blue indicate higher and lower values, respectively. For binary features red indicates presence of the given feature. Positive SHAP values correspond with prediction of early neurologic deterioration

better discrimination than logistic regression (AUC 0.69, 95% CI 0.63 - 0.74) and was also superior to chatGPT 3.5 (AUC 0.59). The most predictive features in the LightGBM and RF models were TICI, presenting NIHSS, and diabetes (figure 1).

Conclusion A ML model for END prediction demonstrated good discrimination and accuracy. External validation is required.

Disclosures H. Hoffman: None. **V. Inoa:** None. **D. Hoit:** None. **A. Arthur:** None. **H. Polavarapu:** None. **N. Goyal:** None.

O-028 THE SAFETY OF EARLY ANTIPLATELET THERAPY FOR ATHEROTHROMBOTIC LARGE VESSEL OCCLUSION TREATED WITH ALTEPLASE AND MECHANICAL THROMBECTOMY – POST HOC ANALYSIS OF RESCUE AT-LVO

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10.1136/jnis-2024-SNIS.28

Introduction/Purpose Re-occlusion and intravascular thrombus formation following mechanical thrombectomy (MT) for acute stroke patients with atherothrombotic large vessel occlusion (AT-LVO) worsen their clinical outcomes. Because intimal damage of the affected arteries caused by endovascular revascularization procedures including MT are of essence in the mechanisms of re-occlusion and intravascular thrombus formation, early administration of antiplatelet therapy (APT) is anticipated to prevent them. However, current guidelines advise against using APT within twenty-four hours after intravenous thrombolysis (IVT), making the management of acute AT-LVO difficult. Thus, in this study we investigated the safety of early (pre-/intra-MT) APT for acute AT-LVO patients who underwent MT following IVT.

Materials and Methods We conducted a post-hoc analysis of the RESCUE AT-LVO study, a registry study of patients with AT-LVO treated with MT across 51 institutions in Japan from January 2017 to December 2019. Among enrolled 770 cases of RESCUE AT-LVO study, the present analysis specifically targeting patients with anterior circulation AT-LVO, receiving IVT with a dose of 0.6 mg/kg of alteplase prior to MT, and initiated MT within 24 hours from the time last known to be well. Patients with pre-stroke APT were excluded.Safety endpoints were mortality at 90 days, any intracranial hemorrhage (ICH), symptomatic ICH defined as ICH with four or more increase of NIHSS score, and all hemorrhagic events. Efficacy endpoint was favorable outcome defined as a modified Rankin Scale of 0–2 at 90 days. We compared the incidence of endpoints between patients initiated APT before or during MT (pre-/intra-MT APT group) and those initiated APT after MT or treated without APT (post-MT/no APT group) using a propensity-score-matched analysis.

Results The present study included a total of 164 patients (120 men, age 72±11 years). Artery-to-artery embolisms from ipsilateral cervical carotid arteries accounted for 45%, while in situ intracranial occlusion accounted for 55%. Among these, 84 received pre-/intra-MT APT, while 80 patients were in the post-MT/no APT group. The proportion of artery-to-artery embolism (55% versus [vs.] 35%, $p = 0.011$) and the frequency of stent placement (65% vs. 14%, $p < 0.001$) were significantly higher in pre-/intra-MT APT group. In the propensity-score-matched cohort (37 patients each), pre-/intra-MT APT did not increase the rate of all hemorrhagic events (14% vs. 22%, $p = 0.359$), any ICH (8% vs. 14%, $p = 0.711$), symptomatic ICH (3% vs. 8%, $p = 0.615$), or mortality (3% vs 3%, $p = 1.000$) compared to post-MT/no APT group. Favorable outcome did not significantly differ between two groups (49% vs 41%, $p = 0.483$).

Conclusion Early APT following IVT in acute AT-LVO patients treated with MT did not increase the risk of hemorrhagic complications or mortality, supporting the safety of this approach.

Disclosures S. Miyamoto: None. **M. Hayakawa:** None. **W. Tsuruta:** 3; C; Medtronic. **M. Shirakawa:** 3; C; Stryker, Medtronic, Terumo, Johnson & Johnson, Kaneka. **M. Beppu:** 6; C; Medicus Shuppan. **N. Sakai:** 1; C; Biomedical Solutions, Medtronic, Terumo and TG Medica. 3; C; Asahi-Intec, Biomedical Solutions, Kaneka, Medtronic, and Terumo. **H. Yamagami:** 1; C; Bristol-Myers Squibb. 3; C; Stryker, Medtronic, Terumo, Johnson & Johnson, and Medico's Hirata. **Y. Matsumoto:** 3; C; Kaneka, Medico's Hirata, Fuji systems, GE healthcare, Otsuka, Takeda, Century Medical, Terumo, Medtronic, and Stryker. **K. Toyoda:** 3; C; Bayer, Daiichi Sankyo, Otsuka, Novertis, and Bristol Myers Squibb. **K. Uchida:** 3; C; Daiichi Sankyo, Bristol-Myers Squibb, Stryker, and Medtronic. **F. Sakakibara:** 6; C; Medicus Shuppan. **S. Yoshimura:** 1; C; Medico's Hirata, Medtronic, and Terumo. 3; C; Medtronic, Kaneka, Stryker, Daiichi Sankyo, Bristol-Meyers Squibb, and Johnson & Johnson. **E. Ishikawa:** None. **Y. Matsumaru:** 3; C; Medtronic, Stryker, Terumo, Johnson & Johnson, Kaneka, and Jimro.