Introduction
Mechanical thrombectomy (MT) and intravenous tissue plasminogen activator are ischemic stroke treatments that assist in restoring blood flow to the brain tissue, but do not guarantee good outcomes. Detection of ischemic cellular alterations systemically in extracellular vesicles (EVs) could be invaluable to disease prognostication and targeted therapeutic development. EVs are nanoparticles released from cells as a means of carrying stimuli specific cargo (e.g., lipids, proteins, and nucleic acids) from one cell to another. We hypothesize that one EV protein of interest, pro brain derived neurotrophic factor (proBDNF), can be clinically relevant and used to predict stroke outcomes/progression.

Materials and Methods
Human ischemic stroke plasma (8 females (F)/5 males (M)) collected during MT in ‘Blood And Clot Thrombectomy Registry And Collaboration’ (BACTRAC; NCT03153683) and control plasma (4F/ 7M) were unbanked. EVs were quantified with Zetaview-NTA analysis, following isolation with Exoquick, before proBDNF protein was quantified.

Results
EVs measured ~107 nm with 1013 particles (EVs)/mL with no significant differences in size or concentration between stroke and control patients with an average age 73.7 and 34.5 years, respectively. EV proBDNF expression was higher in stroke subjects compared to healthy controls (p=0.0021). During MT, females had higher EV proBDNF that correlated to lower time to recanalization (i.e. infarct time; R2=0.657, p=0.0147). In males, higher EV proBDNF expression correlated (R2=0.812, p=0.0988) to higher Modified Rankin Scores (more disability) at discharge.

Conclusions
These data suggest that EV proBDNF levels can reflect brain damage within hours of stroke onset and should be explored further for translational applications.

Disclosures

E-270 SINGLE-CENTER EXPERIENCE WITH THE LARGE BORE CATHETER FOR DIRECT ASPIRATION THROMBECTOMY

Introduction
Mechanical thrombectomy has been established as the mainstay of treatment for large vessel occlusion stroke. Direct aspiration as a first-pass technique in mechanical thrombectomy is attractive due to the cost-effectiveness and timeliness, and has been shown to be non-inferior to stent-retrieval in a randomized study. We present our experience with the Large-Bore Catheter (Cerenovus, Inc.) as the first-pass device in mechanical thrombectomy.

Methods
We retrospectively analyzed all patients treated with mechanical thrombectomy between January, 2021, and January, 2022. Patients were included if the Large Bore catheter was used for direct aspiration on the first thrombectomy attempt. Patient demographics, procedure specifics, imaging, and outcome data were collected.

Results
A total of 50 cases met inclusion criteria, and were included, of which 32 (64%) were male. The average age was 68.8 years. The median ASPECTS score was 9. Median puncture-to-reperfusion time was 14 minutes. First-pass recanalization was achieved in 24 cases (48%). A stentriever was employed for subsequent passes in 20 cases (40%). Successful recanalization (TICI 2b-3) was achieved in 48 cases (96%). Ninety-day outcome data was available for 36 patients. Of these, mRS 0–2 was achieved in 18 (50%) of patients, while 8 patients (22.2%) were dead (mRS 6) at 90 days.

Conclusions
Our single-center experience with the Large Bore Catheter shows successful recanalization and low reperfusion times, with first-pass recanalization in a significant proportion of cases.

Disclosures

Abstracts