Materials and Methods A 74-year-old male with history of remote cryptogenic cerebellar stroke presented with self-limited episodes of dysarthria and left hemifield visual loss. Based on his clinical history and clinical examination, a diagnosis of stroke with cardioembolic or unstable atherosclerotic disease origin was made, and imaging was ordered accordingly.

Results Brain magnetic resonance (MR) imaging showed multifocal subacute and chronic right hemispheric infarcts. MR and CT angiography of the neck demonstrated <50% stenosis of the right ICA due to a partially calcified, possibly ulcerated plaque with intraplaque hemorrhage. Baseline OCT images demonstrated a large excavation within an ulcerated ICA plaque and thrombus. Patient was then treated with a carotid artery stenting under flow arrest. Post-stenting OCT confirmed the collapse of the intraplaque lumen by outward radial displacement of the fibrous cap and excellent stent wall apposition without atheroma protrusion.

Conclusion SyNC is increasingly being recognized as a potential etiology in cryptogenic ischemic strokes. Plaques can be evaluated through imaging modalities such as OCT providing insight towards targeted therapy for patients.

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A RETROSPECTIVE ANALYSIS OF STROKE CODE SPECIFICITY IN PREDICTING ACUTE ISCHEMIC EVENTS

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Background Hospital stroke codes are critically important for early identification and rapid treatment of acute ischemic stroke (AIS). Unfortunately, mimics of AIS are common in clinical practice, and current literature found the specificity in predicting AIS from a stroke code is between 40%-70%. While stroke codes have excellent sensitivity, their low specificity can cause a delay in care and misutilization of resources.

Methods We conducted a retrospective chart review on all stroke codes called during the months of February 2021-July 2021 at MedStar Georgetown University Hospital (MGUH) (n=299). The patient population consisted of individuals being treated by a variety of inpatient services and the Emergency Department (ED). Patients were categorized by their final diagnosis of either AIS/TIA or stroke mimic.

Results The overall accuracy of stroke codes in appropriately predicting an AIS/TIA was 29%, with 39% in the ED and 10% in the inpatient setting. In evaluating stroke mimics, 43.6% were due to toxic metabolic encephalopathy (TME), 9.4% from seizure, 7% from complex migraine, 6.1% from syncope, 5.6% from a functional neurological disorder, 4.7% from hypertensive encephalopathy, and 5.2% from the peripheral nervous system. The other 19% were from other etiologies (stroke recrudescence, non-specific pain, ophthalmologic, or primary movement disorder).

Conclusions This retrospective analysis of stroke codes at MGUH during a 6-month period was 29% specific in predicting AIS. This is significantly lower than what was found in previous studies. Of stroke mimics, TME was the major etiology encompassing 43.6% of cases. The results of our study suggest additional stroke education may be needed for non-neurologists and ancillary staff to appropriately recognize stroke symptoms to better improve the utilization of hospital resources and provide excellent and efficient care.


EVALUATION OF ENDOVASCULAR CATHETER PUSH/PULL FORCES AND ENERGIES WITHIN SILICONE AND GLASS NEUROVASCULAR MODELS WITH IDENTICAL TORTUOSITY

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Introduction This research evaluates force and energy impacts correlated with placement of endovascular catheters into (push) and out (pull) of tortuous neurovascular models of silicone and glass (United Biologics - UB). Three test catheter sizes (Stryker SL-10 1.7F, MicroVention Headway 2.6F, and Medtronic React 68) were placed into the models, using saline (PBS) and UB’s SLIP solution, and compared at room (21°C) and body (37°C) temperatures.

Materials and Methods Push and pull forces were measured by the Bioengineering Devices Lab (BDL) at Northern Arizona University (NAU) using a hybrid rheometer (HR2, TA Instruments). A 3D-printed mounting plate held the lure of an 8F guide catheter under the vertical force plate and provided gradual transition to horizontal placement into the vessel models. The models were connected to a flow system, filled with

Abstract E-133 Figure 1 Push-pull with 6.3F react 68 aspiration catheter. Top – catheter progression through glass model with 180° curve and 360° loop. Bottom – push forces as the catheter progresses through the loop and curve (distance of 8.5 cm)