

P-005 THE RISING RATE OF NEUROTHROMBECTOMY PROCEDURES

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Introduction A prospective study in 2017 at 10 high-volume stroke centers demonstrated an incidence of neurothrombectomy (NT) procedures approximating once every 3 days with a mean daily stroke burden of 85 minutes. With the expansion of the interventional time window for large vessel occlusion following DAWN and DEFUSE 3, the rate of NT consults and procedures are on the rise.

Methods Neurointerventional physicians at 10 participating stroke centers prospectively recorded time requirements for all NT consultations over 30 consecutive 24-hour call periods, including both false positive consultations and NT procedures. Data was collected between May-October 2018, depending on the center.

Results Data was collected from a total of 300 days of call. A total of 294 NT consultations were reported (mean 0.98 per day), including 128 false positive consultations. A total of 166 procedures were performed across the 10 centers (mean 0.55 per day). Six of the 9 centers that also participated in the 2017 study had higher procedural rates per day in 2018 compared to 2017. Fifty-six percent of all consultations and 48% of procedures occurred during non-peak work hours, respectively. Additionally, the ratio of procedures performed to false consultations increased from 0.65 in 2017 to 1.3 in 2018. The average daily NT time requirement per 24 hour call was 124 minutes.

Conclusions NT procedural rates at the same centers have increased from 1 every 5 days in 2016, to 1 in 3 in 2017, to now 1 every 2 days in 2018. The average NT call burden has increased to over 2 hours per 24 hour call shift. This study demonstrates that NT procedural and consultation volumes have increased even further following publication of DAWN and DEFUSE.

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P-006 CAROTID ARTERY STENTING IN ACUTE STROKE USING A MICROPOROUS STENT DEVICE: A SINGLE CENTRE EXPERIENCE

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Introduction Carotid artery stenting (CAS) is an effective treatment for clinically significant carotid artery stenosis in selected patients. The increasing utilisation of endovascular management for acute ischaemic stroke has led to the use of CAS in the emergent setting for patients presenting with acute stroke and concomitant carotid artery stenosis. A variety of carotid artery stents are available and differ in material, shape and cell geometry. Microporous stents represent a new type of stent with significantly reduced cell size. We present a single-centre retrospective case series of emergent CAS (eCAS) procedures using a dual-layer micromesh nitinol stent in the acute stroke setting.

Materials and methods Ethics approval was granted by the institutional review board. Clinical data of all patients who underwent CAS using the Casper stent (Microvention, Terumo, Tustin, CA, USA) at a tertiary level 24-hour mechanical thrombectomy (MT) service over a two-year period (June 2016-June 2018) were retrospectively obtained and reviewed. Data collected included patient demographics, presenting symptoms, pre- and postprocedural National Institute of Health Stroke Scale (NIHSS) score, imaging findings including severity of stenosis or presence of tandem occlusion, use of intravenous thrombolysis (IV tPA) and/or antiplatelet agents, thrombectomy device and stents used, modified thrombolysis in cerebral infarction (mTICI) score and follow-up modified Rankin scale (mRS) data. Any complications were identified and categorised. All eCAS procedures were performed using the Casper dual-layer micromesh nitinol stent system.

Results Twenty eCAS procedures were performed in nineteen patients during this period. Patients received between 1 and 2 Casper stents of varying sizes. The majority of patients had tandem lesions (12/20; 60%) and carotid lesions were most commonly located in the proximal ICA (n=15; 75%). Median NIHSS score on admission was 17 (IQR 9–22). IV tPA was administered prior to six eCAS procedures (30%). Stent deployment was technically successful in all patients and was performed concurrently with MT in fifteen cases (75%). Recanalization rate was 95%. No intraprocedural complications occurred. Symptomatic intracranial haemorrhage (sICH) occurred in two patients (10%) and both resulted in death. No other procedure-related deaths occurred. Stent thrombosis occurred in two patients. No other stent-related complications occurred. Non-neurological complications included coagulopathy (3/20; 15%), hypotension (2/20; 10%), acute kidney injury (1/20; 5%) and aspiration pneumonia (1/20; 5%).