

presentation, highlighting the importance of recognizing this syndrome clinically, and radiologically, in an acute stroke presentation. *Methods:* Description of a case, and literature search on PubMed. *Results:* A 74-year-old man was seen in the ER as a Code Stroke protocol with acute alteration of level of consciousness (LOC). ER assessment showed no focal abnormalities and was significant only for disorientation. CT/CTA/CTP initially appeared unremarkable for acute abnormalities. His LOC deteriorated requiring intubation, and subsequent MRI showed bilateral thalamic infarction. Further CT Perfusion review demonstrated increased Mean Transit Time and decreased Blood Flow without Volume abnormalities in the bilateral paramedian thalami. *Conclusion:* AOP infarction is an uncommon cause of bilateral thalamic infarction. We have demonstrated a case highlighting perfusion abnormalities not previously reported in AOP occlusion, illustrating the importance and utility of advanced CT perfusion imaging whilst considering less common stroke syndromes.

P.059

A case series of non-bacterial thrombotic endocarditis associated with gynecological malignancies

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Background: Ischemic stroke secondary to NBTE is a rare complication of systemic malignancies. Although previously reported in gynecological cancers, this occurrence is infrequent. Furthermore, stroke pre-dating the gynecological malignancy diagnosis has rarely been reported. *Methods:* Case presentations and literature review. *Results:* Case 1: A 48-year-old woman presented with acute dysarthria and left facial weakness caused by a right middle cerebral artery (MCA) infarct. Mitral valve vegetations were found on a transthoracic echocardiogram (TTE). A malignancy screen uncovered a pelvic endometrial adenocarcinoma. Case 2: A 49-year-old woman developed acute right hand weakness. A CT head scan showed a left pre-central gyrus infarct. Her TEE revealed aortic valve vegetations. An ovarian neoplasm was then discovered. Case 3: A 36-year-old woman with a known diagnosis of cervical squamous cell carcinoma developed acute left-sided weakness secondary to a right MCA stroke. Aortic valve vegetations were seen on TTE. *Conclusions:* We have reported three cases of NBTE where the underlying malignancy was gynecological. In the first two cases, the malignancy was discovered while investigating for the stroke mechanism, while the third had a known underlying malignancy. This series highlights the need to consider gynecological malignancies as an underlying cause of stroke in young women; and that the ischemic event can occur prior to the malignancy diagnosis.

P.060

3D carotid reconstructions: imaging, pathology, algorithms and pipelines

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Background: Whole-slide scanning of tissue sections spatially informed by imaging studies offers the opportunity to reconstruct specimens for co-registration to 3D imaging data. Digital image analysis algorithms can be designed to analyze and reconstruct such specimens via electronic “pipelines”. *Methods:* A goal of the Canadian Atherosclerosis Imaging Network (CAIN) is to improve the assessment of carotid atheromatous disease through studies that inform clinical imaging with gold-standard data (plaque pathology). To achieve this, sectioned atheromas are manually annotated and analyzed by electronic algorithm for pathological features of interest. Resulting images are then reassembled in 3D for registration to ultrasound, CT, PET-CT and MRI studies. *Results:* Carotid endarterectomy specimens were sub-serially sectioned, stained, digitized and annotated manually and by electronic algorithms. Resulting 2D images were successfully rendered, reassembled and analyzed in 3D using ex-vivo micro-CT as a spatial reference. Furthermore, histology quantification using colour deconvolution was found to be preferred over hue-saturation-intensity methods 94.7-100% of the time in a blinded multiple rater study. *Conclusion:* Automated “pipelines” greatly facilitate 3D reconstruction in comparison to traditional slice-by-slice methods. Transformations spatially guided by pre-existing imaging data is not only faster, but has superior objectivity and fidelity. With embedded annotations, 3D pathology maps become a rich, micron-level, permanent digital pathological database for correlative studies.

NEUROPHYSIOLOGY (EMG)

P.062

Nail-patella syndrome: a rare etiology of inherited peripheral neuropathy?

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Background: Nail-patella syndrome (NPS) is an inherited autosomal dominant disease, with an incidence of approximately 1 in 50,000. It is characterized by nail dysplasia, hypoplastic patellae, other bone deformities and open angle glaucoma. The phenotype is variable. *Methods:* Case report *Results:* A 66 year old male presented with complaints of mild loss of sensation in both feet with gradual proximal spread to his knees over the past decade. There was no history of pain, paresthesias, autonomic dysfunction or weakness. Examination showed pectus excavatum with symmetrically dystrophic fingernails. Sensation to crude touch, pain and temperature were reduced up to mid shin, and vibration sense was diminished till the malleoli symmetrically. Electrophysiologic studies revealed a mild to