

**P.058****Length dependent sensorimotor peripheral neuropathy often results in ventral abdominal sensory loss**

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**Background:** Length-Dependent Sensorimotor Peripheral Neuropathy (LDSMPN) affects the longest nerve fibers in the body. Less well-appreciated, and absent from the current literature, is that LDSMPN affecting thoracic segments gives rise to ventral abdominal sensory loss on clinical exam. **Methods:** Consecutive patients seen for LDSMPN (n=30) were evaluated prospectively for the presence or absence of ventral abdominal sensory loss. Demographic variables, symptoms, quantitative neurologic findings (Neuropathy Impairment Score [NIS]) and final diagnosis were examined using descriptive statistics. **Results:** Ventral abdominal sensory loss was documented in 20/30 LDSMPN patients (66.7%), mean age was 64.1 years (range 33-81), M:F gender ratio was 19:11, mean NIS was 21.4 (range 0-77). NCS/EMG abnormalities were found in 25/30 patients, with 5/30 having a clinical exam and/or other electrophysiological evidence convincing for LDSMPN. LDSMPN patients without ventral abdominal sensory loss (n=10) had a mean age of 61.2 (range 45-73), M:F of 7:3, and mean NIS of 20.9 (range 0-54). **Conclusions:** 1) Ventral abdominal sensory loss appears to be common in patients diagnosed with LDSMPN of a variety of causes; 2) in addition to those innervating distal limb territories, distal sensory fibers from the thoracic region represent another category of length dependent involvement in LDSMPN; 3) the clinical examination of LDSMPN should include the ventral abdomen.

**P.060****A case of mononeuritis multiplex complicating Epstein-Barr virus infection**

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**Background:** Mononeuritis multiplex is a painful, asymmetrical peripheral neuropathy involving motor and sensory nerves. This neurological condition is classically associated with systemic diseases such as connective tissue disorders, vasculitis, hematologic diseases including cryoglobulinaemia and amyloidosis. It has also been reported infrequently as a paraneoplastic or post infectious disorder. **Methods:** Case report **Results:** We are reporting a case of a 35-year-old man who presented with mononeuritis multiplex following an infectious mononucleosis associated with a mixed cryoglobulinemia. He was treated with IVIG, IV pulse steroid and a prednisone taper over 7 months. Later on, he had a nerve transfer from FCR (*flexor carpi radialis*) to ECRB (*extensor carpi radialis brevis*) and PIN (*posterior interosseous nerve*) due to complete denervation of the PIN without evidence of spontaneous recovery. **Conclusions:** Acute EBV infection should be suspected in the setting of mononeuritis multiplex. This is the first reported case of nerve transfer for this type of nerve injury.

**STROKE****P.061****Multi-modal synchrotron imaging techniques to quantify elemental and molecular changes after stroke in an animal model**

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**Background:** Effects of stroke at the cellular and sub-cellular level remain poorly understood by conventional techniques. We use synchrotron-based imaging techniques to study elemental and biochemical changes in the infarct and penumbra after stroke in an experimental model. **Methods:** Ischemic stroke is induced in mice using the previously validated photothrombotic model. Animals are sacrificed at various time-points after stroke. Fourier transform infrared spectroscopic imaging (FTIRI) is used to gather sub-cellular (< 1  $\mu$ m spatial resolution) imaging data of lipid oxidation and protein aggregation in the areas of interest. X-ray fluorescence (XRF) imaging is used to image the distribution of bio-important elements at the cellular and sub-cellular spatial resolutions. Routine histology and immunohistochemistry are used to co-localize cell-types to areas of interest. **Results:** Preliminary XRF results indicate significant reduction in the concentration of multiple elements in the infarct, compared to the penumbra, at day 1 post-stroke. Some elements begin to return to normal concentration in the penumbra at day 3. FTIRI data shows that lipid and total protein levels decrease, while aggregate protein levels increase in the penumbra. **Conclusions:** Multi-modality synchrotron imaging can be used to map elements as well as bio-molecules in a stroke model. A better understanding of these changes can guide therapeutic interventions after stroke.

**P.063****Durability over time of strategies to reduce door-to-needle times in thrombolysis of acute ischaemic stroke**

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**Background:** Faster administration of tissue plasminogen activator (tPA) for patients with acute ischaemic stroke yields greater clinical benefits. We implemented door-to-needle (DTN) time reduction strategies at our centre and evaluated their short- and long-term effects on in-hospital treatment delays and clinical outcomes. **Methods:** Stroke team pre-notification, direct computed tomography (CT) transfer, not routinely waiting for labs and tPA delivery on CT table were implemented in June 2013. We included all thrombolysed patients admitted directly to our hospital between January 2012 and March 2015. In-hospital delays and clinical outcomes (Modified Rankin scale, mRS) at 3 months were compared between patients pre- and post-modification, and the latter period was divided into early and late phases to assess the durability of our modifications. **Results:** Forty-eight individuals were treated pre-modification, compared to 58 post-modification. The median DTN time