BSCN Scientific Meeting, Preston, 27 June 2014
The abstracts have not been peer reviewed.

1. **Beta Activity in EEG- Should We Worry About This? C. Ross. (Royal Preston Hospital, Preston, UK).**

Aims: to assess beta activity seen in routine EEGs reported by one consultant Clinical Neurophysiologist in two time periods.

Why? Niggling doubts when I see beta activity in paediatric EEGs; concerns may be missing Fabricated or Induced Illness .Personal perception that may be more common in spring and summer, could it be related to newer antihistamines which are often not declared by patients/parents and carers?

Methods: As part of my standard reporting sessions, collected information regarding medication history and date of birth along with an assessment of beta activity. Consecutive EEGs reported in a 6 week period October to November 2013 and 3 week period (to date) in May 2014 were analysed, these time periods being outside of and within hayfever season.

Results: outside hayfever season beta activity was seen in 60/68 recordings (13 inpatients before seventeenth birthday) and this activity was prominent in 12. In the hayfever season the vast majority of recordings (35/37, nine in patients before seventeenth birthday) contain beta activity and it is prominent in 9.

Conclusions: Beta activity is very common in routine EEGs, is neither more nor less common in paediatric versus adult recordings and is not more common in hayfever season. If not very pronounced, we probably do not need to worry about it.

2. **Comparison of CMAP Duration in CIM and Other Myopathies. _D. Konn, R. Arunachalam, D. Allen. (University Hospital Southampton, UK).**

Recording prolonged CMAPs may aid the diagnosis of CIM. We investigate whether CMAP duration is prolonged in inflammatory myopathy, and myopathy of other cause ("non-inflammatory"), and compare these to controls and results previously found in CIM.

Methods: We collected CMAP duration in abductor pollicis brevis (APB) and abductor hallucis (AH) from EMGs performed in our department since April 2007 on 43 patients with myopathy.

Results: The mean CMAP duration was significantly longer in the "inflammatory" group than in the controls in APB (6.4 ms (SD 1.2) v 5.0 ms (SD 0.6) $p = 0.0008$) and in AH (6.0 ms (SD 1.3) v 5 ms (SD 0.9) $p = 0.020$). This change is much smaller than that previously found in CIM (mean CMAP duration 9 ms in APB, 9.4 ms in AH).

There was no significant difference in the duration of the CMAPs between the "non-inflammatory" group and the controls.

Conclusion: The findings suggest that CMAPs can be mildly prolonged in inflammatory myopathies. Prolongation of the CMAP duration to greater than about 9 ms seems to be fairly specific to CIM

3. **Unusual Neuro-myopathic Syndromes in Association With Peripheral Eosinophilia - Similar Presentation With Prominent Myalgia And Peroneal Distribution Weakness And Differing Underlying Pathophysiology . R. Ramdass, R. MacDonagh, A. Chaouch, A. Marshall, R. Mohanraj, D. Gosal and M. Roberts. (Greater Manchester Neurosciences Centre, Salford Royal Foundation Trust, Salford, UK)**

Peripheral and / or tissue eosinophilia has been associated with varying patterns of nerve and muscle pathology. Parasitic infections, vasculitis and connective tissue disorders, hematologic and non-hematological malignancies, toxins and drugs are the principal causes of eosinophilia associated neuro-myopathic syndromes. Eosinophil associated pathology is well recognised in nerve associated vasculitic disorders such as eosinophilic granulomatosis with polyangitis (Churg-Straus syndrome) and polyarteritis nodosa. In addition eosinophils can also specifically target muscle and its surrounding tissue and have been implicated in specific myopathic syndromes - the Eosinophilia associated Myopathies (EAM).

We describe the clinical, neurophysiological evaluation, muscle MRI and biopsy findings of three patients with a very similar clinical presentation of subacute onset of prominent myalgia and distal pattern of peroneal weakness with peripheral eosinophilia but differing underlying pathophysiological mechanisms. The role of eosinophils in various neuromyopathic syndromes and an approach to diagnosis of the Eosinophila associated Myopathies (EAM) is discussed.

4. **Hip Op: Sciatic Not The Only Neuropathy. N. Kane. (Grey Walter Dept of Clinical Neurophysiology, Bristol, UK).**

Whilst sciatic neuropathy is a well recognised traumatic neuropathy complicating hip arthroplasty it is not the only lower limb nerve at risk. This case series describes 6 patients (4 male, 2 female, age range 30 to 83 years, mean 68.2 years) with femoral neuropathy complicating hip surgery. Potential risk factors included revision surgery in 2 patients, repeated anterior dislocation in one patient, and one octogenarian with an underlying peripheral neuropathy. The diagnosis

is largely a clinical one confirmed by electrophysiology, with CNE EMG providing useful early evidence of severity and therefore neurological prognosis, and excluding other neuromuscular pathology. In this series 5 patients had neurophysiological evidence of complete nerve lesions (neurotmesis) and one incomplete (axonotmesis). Typically the patient is unable to walk unaided (4/6) if at all (2/6), has pain in the inguinal region or knee (5/6), may be aware of sensory disturbance in the saphenous nerve distribution (4/6), and has weakness of hip flexion and knee extension (6/6). The knee DTR is absent. Relatively speaking in the author's opinion this is a more disabling neuropathy than the commoner sciatic neuropathy.

5. Reading Between The Lines: A Young Man With Jaw Trembling And Shaky Hands. V. Garikipati, G. Lekwuwa and K. Rauvala. (Royal Preston Hospital, Preston, UK).

A 20-year-old male was seen in neurology clinic for a first fit. He was reading a book late at night in bed upright when he had jaw jerking followed by a generalised tonic clonic seizure. He had a past diagnosis of dyslexia but no seizures or related family history. He had previously noticed jaw tremors and shaky hands when reading which was he attributed to anxiety. Cardiological tests, standard EEG and CT head were normal. MRI head showed a small cavernoma. A video EEG while reading showed multiple subtle episodes of jaw jerks and head movements with characteristic epileptiform activity. A diagnosis of primary reading epilepsy was made. He responded well to antiepileptics and his dyslexia improved. The videoeeg with typical episodes are shown and features of this rare epilepsy discussed.

6. T-Reflex Latency Measurements in The Diagnosis of Demyelinating Peripheral Neuropathies. D. Allen, R. Arunachalam and H. Katifi. (Departments of Clinical Neurophysiology and Neurology, Wessex Neurological Centre, Southampton, UK).

Introduction: T-reflex studies offer the potential of contributing additional electrophysiological support towards the diagnosis of acute inflammatory demyelinating polyradiculoneuropathy (AIDP/GBS) and other demyelinating neuropathies, but have not been extensively studied Biceps and knee jerk reflex recordings provide data from nerves not routinely assessed by nerve conduction studies, yet which are clinically involved..

Objectives: To evaluate the diagnostic utility of T-reflex recordings in the context of the other electrophysiological and clinical findings.

Methods: T-reflex recordings from a cohort of consecutive patients presenting with AIDP (28), CIDP (13)at our institution. We compare these findings to normal controls (53) and to patients with axonal neuropathies (22) and MND (23).

Results: The T-reflex onset latency was frequently prolonged in demyelinating neuropathies. In early or mild AIDP, onset latency could be prolonged despite normal/ reduced tendon reflexes clinically. Mean onset latencies were approximately 150% of normal in AIDP and 200% of normal in CIDP.

Conclusions: T-reflexes are quick and easy to perform, and can provide additional evidence of demyelination in AIDP, potentially increasing the diagnostic yield of the neurophysiological assessment.