

Work diary

Name of the Fellow: Dr. Katalin Réka Czuriga-Kovács

Name of the Mentor: Professor Martin Brown

Institution: University College London, Institute of Neurology

February

02.02.2014: Arriving to London, arranging accommodation in the Ingleby house on Blackshaw road, London, SW17 0QT.

03.02.2014: Appointment at the General Medical Council for full registration. Meeting my mentor, Professor Martin Brown at the Institute of Neurology at Queen Square. Discussing the details of my fellowship. Getting to know some of my colleagues, whom I will work with in the future.

04.02.2014: Reading the Clinical Neurophysiology chapter of the Oxford Handbook of Neurology.

05.02.2014: Reading the electromyography chapters of the book “Klinikai Neurofiziológia” by Dr. Péter Halász.

06.02.2014: Participation at the **EEG Clinic - on EEG Reports** – University College London Hospital (UCLH)

Patient 1.: MPK (2008): Female patient, who possibly had absence-like seizures in her history. EEG showed some episodes of generalized sharp wave activity.

Patient 2.: BD (1936): Female patient, with the history of epileptic seizures and hallucination. On EEG there was mild cortical dysfunction, mildly slowed background, while over the temporal region there were some sharp waves. Based on the report of the technician during the EEG examination the patient became unresponsive for approximately 2 minutes. We also checked the video recorded during the examination. At the time of the unresponsive period on the EEG there was a diffuse slowing with moving artefacts, but without definite epileptic activity.

Patient 3.: CR (1999): Female patient for whom an EEG was requested, as she was complaining about feeling of “being away of herself”. EEG recording was normal.

Patient 4.: VG (2011): Female patient was referred to the Neurophysiology Department as her mother described that she had some episodes of inattention. In her previous history no serious disease was mentioned by her mother. On EEG there was some slowing over the temporal region, but no definitive abnormality.

06.02.2014: Participation at the **Thames Stroke Research Network Annual Meeting**, “The Future for Stroke and Cardiovascular Research”, where the presentations followed as:

1. Prof. Tom Robinson: Future for stroke and cardiovascular research
2. Dr. Richard Perry: Should we close a Patent Foramen Ovale (PFO)?
3. Dr. Michael Muller: Case Presentation
4. Dr. Ameet Bakhai: Translating evidence into practice
5. Prof. Paulus Kirchhof: Focus on AF, use of oral anticoagulants, current research & what to do with patients not suitable for anticoagulation
6. Prof. Gary A. Ford: Future for emergency care
7. Prof. Iris Grunwald: Mobile Stroke Unit

07.02.2014: Participation at the Moyamoya CT/MRI presentation and at the Moyamoya Clinic – National Hospital for Neurology & Neurosurgery (NHNN), UCL

Moyamoya X –Ray demonstration:

Patient 1.: WR (1981): Female patient, who previously had SLE, being on immunosuppressive and steroid therapy. During the last medical examination she complained of eye pain. As she had cerebral imaging not too recently, control examination was suggested.

Patient 2.: ND (1972): Female patient complained of left eye pain. Cerebral MR was performed, which showed abnormal “net like” vessels, typical for Moyamoya disease.

Patient 3.: SGS (1978): Female patients diagnosed with Moyamoya disease, with right middle cerebral artery (MCA) occlusion and shunt insertion between MCA and superficial temporal artery. The shunt occluded afterwards. Reevaluation of the cerebral imaging was recommended.

Patient 4.: LJ (1974): Patient with diagnoses of Moyamoya disease, with previous shunt surgery and extradural hematoma as a complication. The latest cerebral imaging is from 2012, therefore, before decision making new imaging was suggested.

Patient 5.: AA (1992): Male patient with sickle cell disease (SCD), and left hemispherical infarction in 2012 in the anamnesis. On imaging occlusion of the left A1, and anastomosis around the right A1 could be detected. At the proximal part of the left MCA stenosis is also suspected. The question is whether this patient has only SCD or secondary Moyamoya disease as well. The patient needs further follow up.

Outpatient Moyamoya Clinic:

Patient 1.: XY (1979): This patient had sickle cell anaemia in childhood. When he was 10 years old he suffered a stroke (no documentation regarding the side of the stroke), but fortunately he recovered completely. Now he complains of forgetfulness, but no other problems. After a thorough anamnesis and reviewing all the documentation available the consultant states that the patient does not have Moyamoya disease, his previous stroke being as a consequence of SCD.

Patient 2.: XY (1996): Female patient with Moyamoya disease, suffering stroke at the age of six, at that time with left arm paresis, with residual weakness of the distal muscle groups of the left upper limb. Cerebral MR showed bilateral ischaemic lesion in the MCA territories, while MRA showed occlusion of the left MCA and stenosis of the right MCA. The patient had bilateral bypass surgery before. Now the patient complains of frequent headaches, which are preceded by the numbness of the left part of the body. The characteristics of the headache reveal that this is primary headache, migraine. Through this case I learned that acid acetyl salicylic can be interrupted after 20 years of age, and that, female patients should consult with their doctors before deciding childbearing.

Patient 3.: XY (1965): Female patient with Moyamoya disease, who had no complaints in the last two years. She stopped smoking cigarettes for several months. Now she came for her annual regular check up. As the last cerebral imaging was performed in 2012, before suspending the acid acetyl salicylic therapy, new imaging is recommended.

Patient 4.: XY (1969): Female patient with antiphospholipid syndrome in the previous history. Because of claustrophobia the patient had some difficulty when cerebral MRI was performed, therefore not all required sequences could be done. Presently her main complaint is forgetfulness. CADASIL is also arising as a differential diagnosis. MRI with volumetric flair measurement is recommended.

10.02.2014: EMG/ENG clinic - UCLH

Patient 1.: FA (1945): Female patient with previous trauma of the right upper limb, complaining of numbness and insensitivity in the right upper limb in the ulnar nerve distribution. On inspection digits IV-V are in semiflexion, and on examination against resistance the motor strength is slightly reduced. ENG shows entrapment of the right ulnar nerve at the level of the elbow, therefore surgical nerve release should be considered. Based on this case comment on Martin-Gruber anastomosis between the ulnar and median nerve was added.

Patient 2.: XY (1966): Male patients with previous history of hypertension, hypercholesterolemia and right sided MCA infarction. Presently the patient complains of pins and needles at awakening in the left upper limb, lately associating with decreased sensation in the distribution of the left radial nerve. ENG was requested to exclude radial nerve palsy. On examination no muscle weakness, normal reflexes, but decreased sensation on light touch on the left hand is detected exceeding the territory of the radial nerve. ENG did not confirm radial nerve palsy.

Patient 3.: XY (1990): Male patients with right shoulder pain and numbness in the distal distribution of the ulnar nerve for approximately 4-5 years. From time-to time he also has some tingling in the right arm (ulnar nerve distribution). On examination normal muscle strength was found, and there was no sensory disturbance. ENG did not show thoracic outlet syndrome (TOS). Based on this case TOS and sensory distribution of ulnar nerve is explained.

Patient 4.: Miss B. (1970): Female patient complaining of intermittent numbness, pins and needles affecting both her hands. She has been having constant numbness and burning sensation in her feet for some time before her hands started troubling her. On examination there was some weakness during the grip, but abduction of the thumb, pinch and pronation were all normal. Abduction and flexion of F 2&5 were also normal. During ENG examination bilateral carpal tunnel syndrome (moderate on the left, mild on the right), mild left ulnar nerve entrapment at the elbow was described.

11.02.2014: ENG clinic - UCLH

Patient 1.: XY (1956): Female patient with fracture of the left forearm five years ago and fracture of the right distal radius in May 2013. As the plaster cast was too tight, she developed an ulcer on the right wrist, which subsequently cured. Now she is complaining of continuous right sided pins and needles in all fingers up to the middle of the forearm, numbness on the back of the hand, and painful touch of the palm and wrist. On examination the wrist has a lump over the ulnar aspect of the wrist and she is hypersensitive to touch on her fingers palm and wrist – forearm. There is numbness on the back of the hand. Pinch, pronation and abduction of APB, ADM and finger 2 are normal, flexion of the 1st interphalangeal joints against pressure are normal. ENG showed no evidence to support right sided carpal tunnel syndrome.

Patient 2.: SG (1926): Male patient, who has had a right foot drop since he was a young boy, now struggles to walk with the help of two walking sticks. The patient has no family history of neuropathy and he never had a nerve conduction study before. He was previously diagnosed with atrial fibrillation, taking different medication for that. Since May 2013 he has been experiencing constant numbness in his hands mostly affecting the thumb, F2 and F3. He has occasional tenderness around the elbow and shooting tingling down his hand. On examination abduction of the thumb was weak on both sides. Pinch and pronation, flexion and abduction of F2 and F5 were normal. There was some reduced sensation around the toes and in the median nerve territory in the hands. ENG showed evidence for a moderate axonal generalised large fibre sensori-motor peripheral neuropathy. All median nerve responses showed severe nerve deficit. As proximal muscles were normal, therefore the results can be interpreted as a very severe bilateral carpal tunnel syndrome which is worse on the right as there is also absent motor response. Mild evidences for a bilateral ulnar nerve entrapment at the elbow were also found. This could be due to the neuropathy as the finding appears to be subclinical.

Patient 3.: XY (1931): Male patient with the previous history of myeloma multiplex since 2006, right sided weakness since 2009, with cognitive impairment and prostatic cancer based on the documentation. The patient complains of fluctuating weakness in the right upper limb. ENG shows generalized polyneuropathy.

12.02.2014: ENG Clinic – UCLH

Patient 1.: SPM (1973): Female patient with a longstanding history of right shoulder pain due to subacromial bursitis. Her present complaints consist of pain tingling down the arm, occasionally numbness, pins and needles in the right hand mostly affecting finger 2, 3 and 5, which sometimes wakes her up at night. She feels that her grip is also weak at times but she is not dropping things. On examination there was no abnormality in the motor or sensory system, abduction of the thumb, pinch and pronation were all normal. ENG showed normal NAP in the right ulnar nerve. Median nerve examination revealed raised ratio F2, slowed conduction velocity across wrist F3 and slightly broadened at F4, which proof very mild right carpal tunnel syndrome. Based on this case Phalen's test is mentioned.

Patient 2.: AP (1992): Young female patient, who works as a chef at a thai restaurant, is complaining of bilateral tingling and numbness in the fingers. ENG reveals bilateral carpal tunnel syndrome.

Patient 3.: WD (1945): Female patient who has a previous history of middle trigger finger release and a right carpal tunnel decompression about a year ago. She still gets occasional numbness, pins and needles in her hand. She also experiences pain around the thumb, and she feels that her grip is weak. On examination abduction of the thumb, pinch and pronation were all normal. ENG is normal, there is no evidence to support a right carpal tunnel syndrome at this stage.

13.02.2014: EEG Clinic - UCLH

Patient 1.: MH (1995): Male patient with heroin abuse in the previous history, was admitted to the Intensive Therapy Unit (ITU). EEG was performed under fentanyl induced sedation, at it revealed mild general slowing, but no epileptic activity.

Patient 2.: TB (1968) : Male patients with epilepsy in the background, who stopped taking the recommended antiepileptic therapy. He was admitted because of epileptic status to the ITU. He was sedated with fentanyl. EEG shows some sharp waves, but no other abnormality, which could be normal at sleeping.

Patient 3.: JA (1952): Female patient with left MCA territory stroke. EEG was recommended because of disturbance of consciousness, and it showed mild diffuse slowing, which could be due to diffuse cortical dysfunction. No epileptic activity was seen.

Patient 4.: AS (1999): Female patient with no serious disease in the anamnesis. On EEG sharpened activity was seen above the left temporal lobe, with secondary generalisation, which could be caused by partial epilepsy.

Patient 5.: OD (1945): Female patient with left theta activity over the left temporal region. At older ages this is not uncommon and it can be insignificant.

Patient 6.: RT (2009): Male patient who has a mild slowing on the EEG , which is considered normal.

Patient 7.: RC (2006): Female patient known with epilepsy. On the present EEG she has frequent spike and waves in the central region, typical for benign centrotemporal epilepsy.

14.02.2014: Reading the literature on ENG and EMG: Handbook of Oxford Neurology.

17.02.2014: ENG/EMG Clinic - UCLH

Patient 1.: MU (1989): Female patient with SLE in the previous history which has given her joint pains in the knees, elbows and wrist, but this has settled recently. About three months ago had some low back pain and also developed painful numbness over the lateral aspect of both shins, which is worse on the right. The back pain has settled and does not normally trouble her much. She has had a lumbar spine MRI a week ago, which was normal, there was no evidence of lower spine root compression. Her present complaint consists of numbness in the right shin. She was referred to neurophysiological examinations by a rheumatologist. On examination subjectively impaired sensation to light touch was detected in the superficial peroneal nerve distribution on both sides. There was no muscle weakness. She was tender to palpation over the common peroneal nerve as it crosses the fibular head on both sides. Palpation on the left side caused some tingling in the foot. ENG revealed mild bilateral superficial peroneal nerve entrapment. There was no definite evidence of a common peroneal nerve motor involvement or of a generalised large fibre peripheral neuropathy. Remark: this is an unusual presentation, but it can be seen more often in yoga practitioners, who often sit in a Lotus position. The present patient confessed that she does indeed often sit cross-legged either for comfort when studying or for her Pilates.

Patient 2.: XY (1980): Male patient with left elbow injury one year ago. He has had pain in the elbow and in the hand since, initially there was also numbness in the ulnar fingers. This has now improved and is intermittent. On examination pinch, pronation, ADM, 1st dorsal interosseus and ulnar FDP are normal. ENG is similar to that performed in 2013, without any evidence to support an ulnar nerve entrapment.

Patient 3.: XY (1979): Female patient complaining of pain in both, but particularly in the right hand, mostly in the distribution of the median nerve. ENG shows both decreased amplitude and velocity of the right median nerve.

Patient 4.: PA (1941): Female patient with numerous joints replacement and right carpal tunnel decompression in 2006, which she says was very successful. She has great trouble with her feet, which were quite deformed, and have also had surgery. Now she is complaining of still dropping things out of her hand, having also tingling, pins and needles in the forearm. On examination she has no muscle weakness. ENG revealed mild bilateral ulnar nerve entrapment at the elbow, slightly worse on the left. Motor studies were normal bilaterally. Bilateral carpal tunnel syndrome (moderate severe on the left and mild on the right) was also described. On the right could be due to residual slowing after successful decompression or mild continued compression. On lower limbs studies there was no definite evidence of a large fibre generalised peripheral neuropathy.

18.02.2014: Preparation of the plan for the transcranial Doppler (TCD) project performed on patients undergoing carotid endarterectomy because of internal carotid artery stenosis. Reviewing the literature.

19.02.2014: Annual leave.

20.02.2014: Annual leave.

21.02.2014: Annual leave.

24.02.2014: Annual leave.

25.02.2014: Continuation of the TCD project: Finishing the introduction. Defining the aims of the project, patient groups and methods.

26.02.2014: Continuation of the TCD project. Defining the aims of the project, patient groups and methods.

27.02.2014: Reading the book "Aids to the examination of the peripheral nervous system"- Medical Research Council, Memorandum No.45. recommended by neurophysiologist Professor David Holder.

28.02.2014: Reading the book “Aids to the examination of the peripheral nervous system”- Medical Research Council, Memorandum No.45.

March

03.03.2014: Participating at TCD training, and DWL Doppler Box X device presentation: programmes, routine recording and emboli detection. Practice for using the device, founding the good signal of the cerebral blood flow velocity of the middle cerebral arteries.

04.03.2014: Visiting the Occupational Health Department. Reading the book “Manual of Nerve Conduction Study and Surface Anatomy for Needle Electromyography”.

05.03.2014: Appointment at the Job Centre Plus, obtaining national Insurance number. Reading the book “Manual of Nerve Conduction Study and Surface Anatomy for Needle Electromyography”.

06.03.2014: EEG Clinic - UCLH

Patient 1.: DJF (1953): Male patient with alcohol consumption in the previous history. Presently he was admitted because of delirium tremens. During the hospitalization he needed to be mechanically ventilated. Later on the patient developed pneumonia. Because of altered consciousness EEG examination was suggested. Sedatives were suspended before performing the EEG examination, on which burst-suppression pattern is detected.

Patient 2.: EH (2009): Male patient being examined for genetic disorder, the results being in progress. On EEG: generalized slowing, and over the frontal region some spike-and-waves could be seen, which could confirm tendency to focal epileptic seizures. During on this case presentation explanation is given on the montages, their recommendation, in which cases with montages are more suitable to use: bipolar versus common average reference montage.

Patient 3.: JA (1993): Male patient previously having “de javu” feelings followed by tonic-clonic seizures. In the anamnesis he also had left sided hemiparesis, and right sided cerebral atrophy on imaging. On EEG has right temporal posterior abnormality, which could be related to the previous hemiparesis. Here some epileptic activity could also be detected (some sharp waves), which might cause partial epileptic fit.

Patient 4.: BM (2002): Male patient with hyperactivity and some panic episodes in the history. On EEG clear abnormality was detected: epileptic activity over both temporal regions, with left predominance. These epileptic abnormalities can stand for partial epilepsy or might be caused by the temporal lobe dysfunction (which is not necessarily epileptic in character). Because this patient has attention and concentrating difficulty, antiepileptic drug and later repeated control EEG examination is suggested. On EEG normal mu rhythm is also seen. During on this case presentation the importance and characteristics of mu rhythm is explained.

Patient 5.: FM (2000): Male patient with generalized epilepsy in the previous history. Antiepileptic drug was stopped. EEG is normal, just a minor slowing above the temporal region can be detected. After hyperventilation there is lack of spike and waves, fact which in the majority of cases excludes idiopathic epilepsy.

Multi-Disciplinary-Team (MDT) meeting – NHNN

Patient 1.: KO (1970): Patient suffering subarachnoid haemorrhage in February 2014. This case was presented in order to decide the type and the timing of the follow up imaging technique. MRA or Angiography was suggested.

Patient 2.: DK (1988): Presented with headache and increased intracranial pressure caused by extensive sinus thrombosis. Warfarin was started. On control imaging in the superior sagittal sinus there was some filling defect, but compared to the first

examination, it was much better. Case was presented in order to decide for how long should warfarin be continued? Thrombophilia was not justified. As no provoking factor was found anticoagulation is recommended for 6 to 12 months.

Patient 3.: Patient 3.: JL (1933): Patient with paroxysmal atrial fibrillation in the previous history, was admitted because of sudden onset of right sided hemiparesis and dysphasia. CTA showed occlusion of the left ICA, while carotid Doppler performed later showed preocclusive stenosis, which could be explained by recanalization. Anticoagulation was suggested and after 2 week follow-up CTA. No operation was proposed until the control examination.

Patient 4.: JI (1948): Patient having as risk factor smoking, underwent left sided carotid endarterectomy (CEA) previously. Now he was admitted because of left arm weakness. Cerebral CT showed bilateral infarcts, while CTA showed 50% in the right ICA. Anticoagulation and later control imaging was suggested.

Patient 5.: JD (1930): This patient was referred with two episodes of amaurosis fugax on the left eye in the last month. CTA showed 70-79% stenosis on the left ICA, and 60-69% stenosis on the right ICA, while carotid Doppler show 50% on the left side and 70% stenosis on the right side. The patient will be randomised to the ECST-2 trial, and MRI will be performed, while Doppler will be repeated.

Patient 6.: JSJ (1971): Heroin and cocaine addicted patient was admitted because of right sided hemiparesis caused by left striato-capsular intraparenchymal bleeding. Case was presented in order to discuss whether the patient is a candidate for DSA? Although the bleeding localization is typical for hypertensive one, angiography was recommended and will be performed later.

Patient 7.: SR (1965): Patient with positive HIV and cerebral haemorrhage few years ago, now was admitted again because of left sided cerebral haemorrhage. CTA showed no abnormality. Case was presented whether further angiograms are needed or not? No angiography was recommended.

Patient 8.: GH (1946): Patient with couple of previous TIAs and cluster headache, for which MRI was performed, showing atheroma of the basilar artery, but no infarction at that time. Now the patient was admitted again because of posterior territory TIA on the morning of 20/02/2014 with sudden onset of 15 minutes of vertigo, slurred speech and bilateral leg weakness. The aspirin therapy was converted to clopidogrel, and as he is allergic to statins, this was not yet started. The blood pressure is well controlled. Although the report on imaging showed no worsening of the atheroma, this case was presented for discussion about any additional treatment or intervention? Presently conservative therapy is suggested.

07.03.2014: Reading the book “Manual of Nerve Conduction Study and Surface Anatomy for Needle Electromyography”.

10.03.2014: ENG/EMG Clinic - UCLH

Patient 1.: EC (1942): 72 years old female patient with severe right and mild left sided carpal tunnel syndrome in her previous history, now she complains of pain in the right fingers, especially finger 3. Nerve conduction study revealed severe right and mild left sided CTS.

Patient 2.: AD (1977): 37 years old female patient is referred to the Neurophysiology Department to exclude myositis or myopathy. Her present complaint started in September 2013 with pain in the proximal muscles of the lower limb. After 1-2 months the upper limb became painful as well. Her GP assuming polymyositis, as a possible cause, recommended steroids. Her complains did not changed. ENG examination was normal. During EMG, when examining the M. adductor longus mild polyphasia was detected proximally. Based on the examination myopathy could be one explanation. Muscle biopsy is recommended in order to elucidate the cause.

Patient 3.: MA (1992): 22 years old male patient who has had a right forearm pain for 2 weeks ago when accidentally the brachial artery was cannulated instead of the vein (medical students were practicing on each other). On examination the patient

has no muscle weakness. During the examination resting and postural tremor on both, but more pronounced on the right hand could be seen. On nerve conduction study mild entrapment of the ulnar nerve could be detected which was clinically insignificant, and had no relation with the patient's complaints. For the tremor neurological examination was suggested.

Patient 4.: JW (1958): 56 years old male patient with HIV positivity in the previous history, was referred to the Neurophysiological Department with the question of right ulnar nerve entrapment. Now he complains of tingling in the right ulnar fingers, more pronounced on the right than the left side. On examination no muscle weakness or sensory problem was detected. ENG showed diminished amplitude in the right median nerve sensory responses, which might be due to a subclinical carpal tunnel syndrome or HIV related mononeuropathy. There was no evidence of generalized neuropathy.

Patient 5.: CP (1956): 58 years old female patient suffered left wrist fracture in December 2013, plaster cast was recommended for few weeks. Several weeks ago she was diagnosed with left sided breast cancer with some axillar metastases being ahead of the chemotherapy. After removing the cast she started experiencing numbness in the tip of the left fingers 2-4. Her wrist is still painful on the left side. Last week nerve conduction study was performed and it revealed CTS, now she came back for the examination of the brachial plexus. Radial superficial nerve, lateral and medial cutaneous nerve of the left forearm all showed normal nerve conduction study values.

Patient 6.: XY (1973): 41 years old female patient with known bilateral carpal tunnel syndrome (mild on the left and mild/moderate on the right) is complaining again of tingling in the fingers (with right predominance). Nerve conduction studies revealed the same finding as before, with no progression either regression of the process.

Patient 7.: XY (1931): Female patient with right sided hip operation in the previous history was referred to the Clinical Neurophysiology Department because of proximal muscle weakness of the right lower limb. EMG and nerve conduction studies were performed. During EMG M. gluteus maximus, medius, minimus, M. iliopsoas were examined. The examinations could not reveal any muscle or nerve function abnormality. Therefore the conclusion was the symptoms probably have biomechanical background.

10.03.2014: MDT Meeting - UCLH

Patient 1.: SM (1939): 75 years old male patient was admitted because of transient right sided hemiparesis. Cerebral CT revealed lesion typical for ischaemia in the left hemisphere, CTA showed moderate stenosis at left vertebral artery and left sided ICA stenosis, with the maximum (50-69%) of the stenosis at the carotid syphon. As the plaque's surface is ulcerating, this patient has a high risk of recurrent stroke, therefore ICA stenting will be performed tomorrow.

Patient 2.: JM (1930): 84 years old male patient was admitted because of slurred speech, and left sided facial droop. Cerebral CT showed no proof of recent ischemia. CTA showed moderate right sided stenosis at the carotid bifurcation, while calcified, but not significant stenosis on the left side and also stenosis of the left vertebral artery. Doppler ultrasound was also performed, and it revealed the same calcified plaques bilaterally, without increased velocities. As the symptoms are typical for the vertebrobasilar system, cerebral MRI will be performed to visualize the eventual consequences of the stroke.

Patient 3.: FK (1921): 94 years old female patient was admitted because of left sided hemiparesis. Cerebral CT showed ischaemic lesion in the right hemisphere, CTA showed very tight stenosis at the distal carotid syphon on the right side, the M1 part of the MCA was well visualized without stenosis, in the right internal carotid artery atheroma causing $\leq 50\%$ was described. The proximal part of the right vertebral artery was difficult to follow, and the V4 segment of the left vertebral artery had a focal stenosis. Doppler ultrasound was also performed and it showed the same, $> 90\%$ ICA stenosis on the right side, and 50-59% stenosis on the left. MRI was recommended.

Patient 4.: HT (1970): 44 years old male patient was admitted because of left sided hemiparesis. CTA showed occlusion of the ICA at the level of the carotid syphon. This case was presented in order to elucidate whether dissection caused the symptoms. MR was also performed. The diffusion weighted imaging showed ischemia in the right hemisphere, particularly watershed infarcts. MR also showed the occluded right ICA. The opinion of the neuroradiologist was that, in case of occlusion cannot be stated for sure, whether carotid dissection caused the symptoms or not.

Patient 5.: MA (1926): 88 years old male patient was admitted because of left arm weakness and left sided facial droop. Cerebral CT showed hyperdense thrombus in the right M1 segment, which is typical for acute occlusion. CTA showed right sided ICA occlusion with a small recanalized portion, which was followed again by occlusion.

Patient 6.: MK (1944): 70 years old male patient known with right sided severe but asymptomatic ICA stenosis. Previously this patient refuses to participate in the ECST-2 trial. During Doppler ultrasound performed few days ago progression was suspected, supported by increased velocity values. CTA was also repeated in order to sustain the suspicion of a progression. However the latest CTA compared with the previous one (performed in 2012) showed no progression.

Patient 7.: JL (1933): This patient case was discussed last week. Patient with paroxysmal atrial fibrillation in the previous history was admitted because of sudden onset of right sided hemiparesis and dysphasia. CTA showed occlusion of the left ICA, while carotid Doppler performed later showed preocclusive stenosis, which could be explained by recanalization. Anticoagulation was recommended and follow up CTA. The second CTA showed intraluminal thrombus in the left ICA, so called “donut” sign could be observed.

11.03.2014: Reading the literature, electromyography chapters of the book “Klinikai Neurofiziológia” by Dr. Péter Halász.

12.03.2014: Reading the literature, electromyography chapters of the book “Klinikai Neurofiziológia” by Dr. Péter Halász.

13.03.2014: EEG Clinic - UCLH

Patient 1.: NR (1997): 17 years old male patient, who had seizures at the age of nine, being treated at that time. In November 2013 he had a few attacks again. On the EEG recorded few days ago, frontal and temporal slowing could be detected.

Patient 2.: AA (1957): 57 years old female patient, with HIV positivity in the previous history was admitted because of right sided weakness, confusion and cognitive deficit. Encephalopathy, encephalitis was suspected. On the EEG frequent frontal and temporal slowing could be detected, consistent with focal cortical dysfunction, which could be related to HIV encephalopathy or CMV encephalitis. There were also some sharpened elements, which could be given rise to partial epilepsy. However there was no evidence of subclinical seizures.

Patient 3.: AJ (1998): 17 years old male patient who has had EEG monitoring previously in 2012, at that time without any definite abnormality. Now he was referred to the Neurophysiology Department because of some short episodes of unconsciousness. The EEG recording was normal again, with no evidence of epileptic activity.

Patient 4.: SC (2006): 7 years old male patient who has had three febrile seizures was referred to the Neurophysiology Department. During the EEG monitoring, the background was normal, but there were several brief episodes of generalized spike-waves which were subclinical. However these could be consistent with idiopathic generalized epilepsy.

Patient 5. : DD (2011): 3 years old female patient, who has had before EEG (at age 1 month), which was normal. Now she had a new EEG monitoring. The record is normal, except for some right temporal sharpened slow waves which once or twice partly generalize to the left. These are of borderzone significance. These are in a similar distribution to sharp waves seen in her record when aged 4 weeks.

MDT Meeting - NHNN

Patient 1.: PE (1965): 49 years old female patient who was admitted because of headache. Cerebral CT revealed right sided haemorrhage, with cavernoma which could be the source of the bleeding. Follow up of the patient was recommended.

Patient 2.: BA (1972): 42 years old female patient examined because of several facial drop consecutively (various TIAs) on both sides (not in the same time) in the last weeks. The patient has no diabetes mellitus. Cerebral CT revealed multiple infarcts in the right watershed territory. CTA showed occlusion on the distal part of the right ICA. Vasculitis was suspected. Therefore lumbar puncture will be performed and after six weeks MRI will be performed.

Patient 3.: CO (1931): 83 years old female patient has had a few episodes of left facial droop and left arm weakness. On cerebral imaging left ICA aneurysm was detected, which is not related to the present symptoms.

Patient 4.: KS (1934): 80 years old male patient was found drowsy. Cerebral imaging, native CT revealed thrombus in the top of the basilar artery, bilateral subdural haematoma (the right sided being mixed with new and old components), dilated lateral ventricles and fracture of the right temporal bone. CTA showed thrombus in the basilar artery and thin right vertebral artery (hypoplasia?). Follow up scan is recommended later.

Patient 5.: SJ (1940): 74 years old male patient with PM implantation in the previous history, was admitted because of left sided hemiparesis. Cerebral CT showed right M1 occlusion, the clot retrieval was successful. Three days after the admission new event occurred with P2/P3 thrombus. LMWH was started. Right cerebellar meningioma was also suspected based on the native scan. To confirm the diagnoses of the meningioma postcontrast CT scan is recommended.

14.03.2014: EEG report - NHNN

Patient 1.: CG (1957): 57 years old male patient, who during the EEG recording was confused but cooperative. On the EEG occasional intermittent slowing was detected with the maximum over the left temporal region. No epileptic activity was seen. During this EEG reporting positive phase reversal, negative phase reversal and the horizontal eye movements were discussed.

Patient 2.: BP (1991): 23 years old male patient, who has had grand mal seizures in the previous history. The present EEG is normal, only a short period of stage 2 sleep was captured. During this case vertex waves are discussed.

Patient 3.: XY (1967): 47 years old female patient was referred to the Neurophysiology Department because of nocturnal jerks. Sleep deprived EEG was performed and it was in the normal limits. During this report K-complexes could be seen. Transverse montage as the best choice for EEG during sleeping was also discussed.

Patient 4.: VP (1977): 37 years old male patient was referred to the Department of Clinical Neurophysiology because of one short episode of loss of consciousness. The present EEG monitoring was normal. For further evaluation sleep deprived EEG was recommended.

Patient 5.: MW (1941): 73 years old female patient was referred to the Department of Clinical Neurophysiology because of sort episodes of inattention. During the present EEG monitoring intermittent slow activity over both temporal regions could be detected, there was no epileptic activity. Sleep deprived EEG was recommended as further evaluation.

17.03.2014: ENG/EMG Clinic - UCLH

Patient 1.: EO (1975): 39 years old male patient with vitamin D deficiency and toxoplasmosis in the previous history, was referred to the Neurophysiology Department because of pain in the thigh. While ENG was unremarkable, during EMG when examining the rectus femoral and M iliopsoas muscles few notching were seen. For further evaluation muscle biopsy was recommended.

Patient 2.: AT (1968): 46 years old female patient complains of tingling in the chest and both arms and fingers. In the limbs she has no pain sensation, however she mentions neck pain. The tingling sensation lasts for hours usually, and it is present during the day, not at night. Nerve conduction study is normal, both at the median and ulnar nerve. There is no evidence of median or ulnar nerve entrapment.

Patient 3.: HP (1934): 80 years old female patient with osteoporosis, osteoporotic T12 vertebral fracture and rheumatoid arthritis in the previous history was referred to the Neurophysiology Department because of left arm numbness and difficulty in fine movements with the left hand. She also complains of pins and needles in the tip of the fingers 1-4, and bilateral wrist pain. Her present complaint started 3 months ago suddenly, since then numbness in the fingers is present all the time. Symptoms were more pronounced on the left. On examination there was selective decreased sensation for light touch and weakness in the left thumb. Nerve conduction study revealed left carpal tunnel syndrome.

Patient 4.: XY (1986): 28 years old female patient with low back pain in the anamnesis. Now she was referred to the Neurophysiology Department, as two days before delivery she developed low back pain and numbness in the L5 distribution of the right lower limb. On examination mild right dorsiflexion weakness could be detected against resistance. Nerve conduction study revealed a right L5 radiculopathy (probably a neuropraxia which will recover spontaneously). There was no evidence of a postganglionic lumbosacral plexopathy. The picture is an incidental L5 radiculopathy due to the compression of L5 disc. EMG examination showed no abnormality.

Patient 5.: JB (1924): 90 years old male patient was referred to the Neurophysiology Department because of left arm weakness, left wrist drop after falling. On examination weakness of the left thumb could be detected. Nerve conduction studies showed severe mixed sensory-motor polyneuropathy.

18.03.2014: ENG/EMG Clinic - NHNN

Patient 1.: OJ (1964): 50 years old female patient who has had neck pain since childhood. Previous cervical MRI showed cervical stenosis and arthritis, cerebral MRI was unremarkable. During the examination M. biceps brachii, M. extensor dig. communis and FDIO were examined, and showed minor abnormality, which could be related to the neck pain. However no active denervation was seen.

Patient 2.: OM (1957): 57 years old female patient complains numbness (with left predominance) of both hands for 1 year. In the last weeks she drops things from her hands. During the one year period her complaints remained the same, without any evident worsening. She states that the numbness is more severe during the night, sometimes waking her up. She also complains of neck pain, irradiating down the arms. ENG (median, ulnar, radial nerve) and EMG (Mm. triceps and biceps brachii) were all within normal limits.

Patient 3.: DD (1931): 83 years old male patient was referred as an inpatient with the suspicion of generalized neuropathy. Detailed nerve conduction study of the upper and lower limbs, revealed length-dependent axonal sensory-motor PNP. During this case length-dependent and non-length-dependent neuropathies were discussed.

Patient 4.: SK (1952): 62 years old female patient with left hip replacement one year ago in the previous history. Her present complaints started after the intervention with foot drop on the left side. During EMG examination spontaneous activity and reinnervating motor units were present when examining the left anterior tibial and left peroneal longus muscles, which proves that the nerve is regenerating. During this case examination of the biceps femoral nerve was also discussed in detail.

Patient 5.: IS (1976): 38 years old female patient was referred to the Department of Clinical Neurophysiology with the suspicion of right-sided carpal tunnel syndrome. Nerve conduction study confirmed the diagnosis of right CTS. During this

case some practical issues were discussed: in case of CTS damage occurs first at the level of the middle finger, finger 4 should be examined in case of mild CTS. The Canterbury scale was also highlighted.

Patient 6.: SS (1956): 58 years old female patient known with muscle dystrophy, which started after the second delivery. For 10 years the patient has had CTS, 8 years ago she was given steroid injection in the left wrist. Her symptoms started to aggravate again in the last two years. She also has wrist pain due to rheumatoid arthritis. Now she is complaining of pins and needles, which woke her up during the night. Nerve conduction study showed moderate right sided and mild left sided CTS.

19.03.2014: Reading the literature: Manual of Nerve Conduction Study and Surface Anatomy for Needle Electromyography.

20.03.2014: MDT Meeting - NHNN

Patient 1: AA (1930): 83 years old male patient had right sided amaurosis fugax in September 2013. Examinations revealed 70-79% right ICA stenosis, and 90-99% left ICA stenosis, caused by irregular plaque. Cerebral MR, MRA was already reviewed. The cerebral MR showed diffuse parenchymal volume lost and several lacunar infarcts in the right thalamus and in the pons. The decision was that this patient should be recruited in the ECST-2 trial.

Patient 2.: AM (1926): 88 years old male patient was admitted on the 9th of March because of right MCA stroke. Later the left sided weakness worsened and the infarct on the scan also extended. CTA showed subtotal/total occlusion of the right ICA. The patient also developed intercurrent urosepsis and acute kidney insufficiency, which might have caused worsening of the symptoms. The infection and the renal dysfunction started to resolve. Reviewing the CTA, the opinion of the neuroradiologist was that recanalization after occlusion of the right ICA could be possible, therefore follow up CTA is recommended after 2 weeks.

Patient 3.: VP (1979): 34 years old male patient was admitted because of vomitus, vertigo 1 week ago. He had no serious disease in the previous history. First cerebral CT scan showed hypodens lesion in the left cerebellum. MRI performed later showed bilateral cerebellar vascular lesion (with left predominance, left PICA infarction and right superior cerebellar artery territory infarction) and bilateral thalamic lesion as well. CTA suggested vasculopathy as the basilar trunk was abnormal. 4 angiogram was suggested, as the PICA infarction cannot be explained by the basilar thrombus. MRA was also performed, no dissection was detected, in the P1 segments there were no flow, APC were filled from the communicating posterior arteries. The last CTA (today) showed narrowing, than occlusion of the distal basilar part.

Patient 4.: SH (1963): 51 years old male patient with hypertension in the previous history, was admitted because of word finding difficulty after a stressful day of work. Last year he had a TIA (numbness of the left limbs), after which aspirin was started. Cerebral CT performed recently showed no infarction. CTA showed no occlusion, however mixed plaque of the right ICA could be seen, which causes less than 50% stenosis. Clopidogrel was suggested instead of aspirin.

Patient 5.: MJ (1941): 72 years old female patient with hypertension and chronic tremor in the previous history was found collapsed with headache and confusion. Cerebral CT showed left cerebellar bleeding. Cerebral MR did not revealed signs of hypertensive small vessel disease. MRA showed that the left tentorial vessels are more prominent, however no vascular malformation could be seen. As the bleeding is not a purely parenchymal haematoma, and as AVM is suspected, angiogram will be performed.

Patient 6.: MY (1942): 72 years old male patient presented with fluctuating GCS. Cerebral CT showed basilar thrombus. Thrombolysis could not be performed because of the time window. The patient clinical status deteriorated and he needed

endotracheal intubation. The case was presented in order to discuss, whether is required any endovascular management. The conclusion was that, before any intervention DWI MR should be considered.

Patient 7.: FN (1958): 56 years old female patient known with non small cell lung carcinoma in remission, with previous chemotherapy finished few days ago. She was admitted because of sudden onset of speech abnormality on the 17th of March. Cerebral CT showed subacute left frontal ischaemic lesion, CTA was unremarkable. Cerebral MRI suggested metastasis, which is not very hypervascular.

Patient 8.: BC (1969): 45 years old male patient suffered head injury 3 weeks ago. Afterwards he developed slurred speech and left homonymous hemianopia. Cerebral MR was performed, which showed 2 infarcts: in the right MCA territory and one right occipital lesion with some haemorrhagic transformation. This case was presented in order to decide whether the lesions are simply infarcts with possible embolic source? The decision was that further examinations are needed; echocardiography and carotid Doppler and CTA should be performed.

21.03.2014: EEG Report - NHNN

Patient 1: XY (1958): 56 years old female patient who consumed alcohol in excess before, being abstinent for four months, was admitted because of repeated generalized tonic-clonic seizures. The examinations revealed pneumococcal meningitis. Because of the multiple GTCS, the patient was sedated. Cerebral CT revealed bilateral subdural hygroma. EEG showed continuous generalized slowing, with intermittent lateralized theta (right predominance), consistent with generalized encephalopathy. There was no epileptic activity.

Patient 2.: BR (1944): 70 years old male patient known with MSA, was referred to the Neurophysiology Department because of short periods of inattention. During the EEG monitoring there was no subclinical seizures recorded. EEG recording showed bilateral generalized slowing, with several bilateral temporal sharp wave episodes, which are consistent with interictal epileptiform discharges. During this report the fact that, seizures in the patient's age group often have very subtle behavioural manifestation, the leading symptom is often transient change in the level of awareness, alertness was highlighted. 24 hour EEG monitoring was recommended.

Patient 3.: BT (1954): 60 years old male patient was referred to the Neurophysiology Department because of the suspicion of an epileptic seizure. The EEG recording showed drowsiness enhanced theta background. Otherwise the EEG was normal.

Patient 4.: BK (1940): 74 years old male patient was referred to the Neurophysiology Department because of a short period of inattention. The EEG was normal.

Patient 5.: EM (1935): 79 years old female patient was referred to the Neurophysiology Department because of fluctuating memory problems in order to exclude subclinical seizures. The EEG was normal, it did not revealed epileptic activity.

Patient 6.: TS (1968): 46 years old female patient was referred to the Neurophysiology Department because of transient right hand numbness . Cerebral CT, CTA was normal. EEG was also normal, with no evidence of focal or generalized epileptic activity.

24.03.2014: MDT Meeting - UCLH

Patient 1.: OR (1933): 81 years old male patients had right sided arm weakness in December 2013. At that time cerebral CT showed left MCA territory infarction. Now he was admitted because of the worsening of the right arm weakness. This case was presented in order to decide whether there are any new lesions on cerebral imaging? Reviewing the CTA performed on 23.01.2014 less than 50% stenosis was seen at the left ICA, however at the MCA division calcified emboli was suspected. Cerebral MR performed at 20.03.2014. showed multiple left MCA territory infarction.

Patient 2.: SM (1952): 62 years old female patient presenting with right sided arm numbness and weakness. The weakness resolved, however she still has subjective sensory complaints. There was a discrepancy between the Doppler and CTA results; therefor her case is presented for re-evaluating the CTA. CT showed left MCA territory infarction, while CTA showed less than 50% stenosis on the left ICA. The plaque being calcified, with no ulcerative part, medical therapy is recommended, no operation is suggested at this point.

Patient 3.: DH (1947): 67 years old male patient who presented first right sided facial droop after that left sided hemiparesis. On non-contrast CT thrombus in the basilar artery was suspected. CT showed multiple different aged cerebellar infarcts (older lesion on the left side). CTA showed possible dissection of the right vertebral artery, intracranial part of the vertebral artery being occluded; clot in the basilar artery with the partial occlusion of the left P1 segment. Cerebral MR showed (DWI also) bilateral cerebellar, right medulla and left cerebellar peduncle infarction, MRA showed no flow in the right vertebral artery. This patient is now on dual antiplatelet therapy.

Patient 4.: KM (1936): 78 years old male patient on warfarin therapy for atrial fibrillation. His case is presented to discuss about the cerebral CT performed recently. The question of the physician is whether this patient has haemorrhage in the right hemisphere. On native CT scan a small right sided calcification is described, most probably a calcified cavernoma is suspected by the neuroradiologist.

Patient 5.: RG (1943): 71 years old male patient with diabetes mellitus in the previous history was admitted because of left sided hemiparesis. Cerebral CT showed no parenchymal lesion on the right side, but there was a small infarction on the left side at the basal ganglia territory, which is unrelated to the present complaints. CTA showed non-significant calcification at the bilateral ICA level, and right M1 segment is described as irregular.

Patient 6.: BJ (1992): 22 years old male patient was examined because of left sided headaches. Cerebral MR was performed which showed on the left side extradural vascular abnormality, which could be either aneurism or AVM. The question of the physician was whether this vascular abnormality is communicating with the intracranial vessels? This question is important because the answer is crucial from the further therapeutic point of view. Infiltration with alcohol is preferred if it has not intracranial communications, while removal of the malformation will be considered if it has. The neuroradiologist opinion was that based on this imaging cannot be stated whether there is any communication or not. For this CTA or MRA with time of flight technique was recommended.

Patient 7.: PJ (1935): 79 years old female patients had to be intubated for acute respiratory insufficiency. The intubation was complicated, took longer time and during the procedure the patient had blood pressure drop. Afterwards the patients developed cortical blindness. Cerebral CT was performed and it showed bilateral posterior and deep supratentorial borderzone ischemia and bilateral cerebellar infarctions.

25.03.2014: ENG/EMG Clinic - NHNN

Patient 1: LJ (1957): 57 years old female patient complaining of pain in the feet, which started approximately 5 years ago, and worsened slowly. She also mentions tingling in the fingers of the hands and the whole hand. For 4 years she is taking 2x150 mg pregabalin. Now she was referred to the Department of Clinical Neurophysiology with the suspicion of polyneuropathy. Nerve conduction study revealed left carpal tunnel syndrome. Sympathetic skin response test showed small fibre neuropathy. During this case the importance of temperature (limb) and changes in the recorded parameters induced by reduced temperature was highlighted.

Patient 2.: EP (1971): 43 years old male patient known with hereditary neuropathy with liability to pressure palsy was referred to the Department of Clinical Neurophysiology for nerve conduction study. He complains of numbness in the feet for

two years, numbness in the tip of the fingers (especially F5). ENG showed mixed motor predominance sensory-motor polyneuropathy. The axonal damage in this case is secondary to demyelisation.

ECST-2 trial meeting: some issues regarding the TCD examination are discussed.

26.03.2014: Reading the literature. Manual of Nerve Conduction Study and Surface Anatomy for Needle Electromyography.

27.03.2014: EEG Report - UCLH

Patient 1.: XY (2005): 9 years old female patient who has had head injury before, requiring intensive therapy at that time, and as a consequence developmental delay occurred. She also had three episodes of epileptic seizures, last one in January 2014. Follow up EEG was performed. Report: the background is within normal limits, however there are fairly frequent left temporal sharp waves and also some more frequent generalized spike wave runs. Appearances are of active partial epilepsy. The generalized episodes might be due to secondary generalization.

Patient 2.: HE (2009): 5 years old male patient, who was treated before for encephalopathy (the type not mentioned) hasn't had any seizures since the last discharge. He is taking levetiracetam and phenytoin since then. He also has some speaking difficulty. His sister has severe autism. Appearances on the present EEG are similar to the previous record. There are still fairly frequent high voltages slow waves, which are sometimes notched. Appearances are again of a diffuse cortical dysfunction.

Patient 3.: AS (1999): 15 years old male patient who was referred to the Neurophysiology Department because of short episodes of inattention. EEG report: There are some unequivocal fronto-temporal sharp waves, which are infrequent. Appearances are consistent with partial epilepsy.

ENG/EMG Clinic:

Patient 1: RK (1971): 43 years old male patient with a history of left wrist fracture, for which he was operated before. His present complaints – pain in the arm - started 10 days ago, when his left shoulder dislocated during sleeping. His son tried to replace the dislocated shoulder, but without success. Nerve conductive study did not show any definitive neuropathy.

MDT Meeting - NHNN

Patient 1.: YF (1925): 89 years old female patient was admitted because of right sided hemiparesis. Cerebral CTA revealed left aneurysm with thrombus in it, the risk of bleeding being very high; however the risk of stroke is 20% during the intervention as well. Aspirin is recommended. The conclusion was that because of the high risk during the operation, this is not recommended. Cerebral MR may be considered later.

Patient 2.: YA (1959): 55 years old female patient who had one TIA in early December 2013. Antiplatelet therapy was started. She had a second TIA on the 24th of December. CTA revealed right MCA stenosis, the right PCA being also irregular. DWI MRI showed new mostly deep small infarction. The therapy was supplemented with another antiplatelet drug. Last cerebral MR was performed in March 2014, and it revealed that new infarcts appeared again mainly in the right hemisphere (distal cortical infarcts). Further examinations are required e.g. Moyamoya, vasculitis should be ruled out.

Patient 3.: MM (1977): 37 years old male patient with learning difficulty, but no other serious disease in the history, was found lying on the floor on the 21st of March. Cerebral imaging revealed subacute large right MCA territory infarction. MRA suggested proximal MCA occlusion and thrombus in the distal ICA as well. During hospitalization very high CRP level was observed, chest X-Ray revealed pneumonia. Cardiac examination is recommended in order to find out the aetiology (PFO, myxoma, endocarditis?).

Patient 4.: MS (1933): 81 years old female patient with AF, PM, osteoporosis, COPD, left breast cancer, with mastectomy and node clearance in 2010, was admitted because of left frontal parenchymal bleeding with subarachnoid extension. As the haemorrhage is not a typical one and MRI cannot be performed, CTA should be done in 6-8 weeks.

Patient 5.: HW (1938): 76 years old female patient was found collapsed on the floor. Cerebral imaging revealed right occipital cortical bleeding. Because of acute kidney insufficiency CTA could not be performed at the time of admission. The case was presented in order to decide whether MRI/MRA or CTA should be performed. The decision of the neuroradiologist was that CTA is recommended.

Patient 6.: HD (1947): 67 years old male patient with complex history and intercurrent illness. He got drowsy and cerebral imaging revealed bilateral PCA infarction, CTA showed occlusion of the right vertebral and left superior cerebellar artery. The case was presented in order to elucidate the origin of the stroke. As thrombus was sitting in the artery couldn't be stated whether dissection is in the background or not.

Patient 7. CS (1960): 53 years old female patient was admitted because of dizziness, imbalance feeling, headache, after that developing left sided hemiparesis. Cerebral imaging revealed left small PICA aneurysm. The case of this patient should be presented to the neurosurgeons was concluded.

Patient 8.: RA (1978): 36 years old male patient with borderline hypertension and family history of hypertension was admitted because of slurred speech and facial droop on the right. Cerebral CT showed left frontal, and right sided basal ganglia small infarctions of different ages. MRI also revealed many small lesions, some of them being of inflammatory origin. The following examinations were recommended: contrast enhancement MRA, lumbar puncture, blood tests for immune panel (ANA, ANCA, etc.) and infectious processes (HIV, syphilis).

Patient 9.: JL (1978): 36 years old male patient with a history of not well controlled hypertension was treated in February 2014. At that time cerebral CTA suggested vasculitis, however the MRA was normal. The decision was that high resolution MR should be performed to visualize the wall of the arteries, and DSA is also recommended for evaluating the right MCA abnormality.

Patient 10. TA (1983): 31 years old female patient was examined because of several episodes of headache. On cerebral MRI "stripe" like lesions could be detected in the left cerebellar and supratentorial regions (artefacts?). After the second headache, lumbar puncture was also performed, and it was normal, with no ferritin. MRA suggested that the right M2 segment changes its calibre. Susceptibility weighted imaging (SWI) MRI was recommended in order to elucidate the type of the lesions.

28.03.2014: Annual leave.

31.03.2014: Meeting with my mentor Professor Brown, discussing details of the TCD project. Reading the literature.

April

01.04.2014: ENG/EMG Clinic - NHNN

Patient 1.: CZ (1954): 60 years old female patient with osteoarthritis, epilepsy, asthma and diabetes mellitus in the previous history. She had operation for right CTS before. Now she is complaining of right hand weakness and numbness mainly in F3, the left hand also bothers her especially at night. She complains of numbness in the feet, which is not present all the time. Nerve conduction study revealed mild length dependent sensory axonal neuropathy (diabetes?). There was no evidence of significant right median nerve neuropathy at the wrist.

Patient 2.: MA (1952): 62 years old male patient with a history of diabetes mellitus for 13 years, well controlled with oral antidiabetics. In 2011 he had vein surgery on the left leg, and 1 month ago he had some heart problems. Now he is complaining of pain in the left leg – thigh, knee and ankle level- which started 1 year ago. Physical activity and long standing increases the pain intensity, the pain being intermittent on extension and sitting. There is no numbness in the leg. On examination there was no muscle weakness. Detailed nerve conduction study and EMG (M vastus medianus, M. tibialis anterior, M. gastrocnemius) were performed. There was no evidence of generalized peripheral neuropathy or left sided plexopathy.

Patient 3.: SM (1967): 46 years old male patient, who has had right hip replacement in October 2013. Afterwards sudden pain started, being followed by numbness and cramping back pain. Now the patient complains of numbness at the right lateral thigh, he also experiences numbness in F3-F5 on both hands during the night. Nerve conduction study and EMG were performed: the right lateral femoral cutaneous nerve looked damaged, but the rest of the nerves had good function.

Patient 4.: PA (1971): 43 years old male patient with no diseases in the history, 4 months ago after a hard physical activity (tote) started to feel pain in the left arm (especially shoulder) during the following night. Two week later one day he woke up with the typical picture of radial nerve palsy. On examination wrist flexion against resistance and extension of the fingers against resistance was weaker. ENG and detailed EMG was performed, and they showed left radial nerve palsy and denervation in the muscles innervated by the ulnar nerve.

Patient 5.: DL (1997): 17 years old female patient, who had a sky accident with the consequence of ligament and tendon damage, but no fracture. She was wearing plaster for a month. Later mild inward rotation of the left ankle could be observed, which became more pronounced as time passed. In the present the left ankle is fixed in inward rotated position. Based on heteroanamnesis, her mother states that the position of the ankle is the same during sleeping. Cortical magnetic stimulation was performed and it was normal.

02.04.2014: Reading the literature, electromyography chapters of the book “Klinikai Neurofiziológia” by Dr. Péter Halász.

03.04.2014: MDT Meeting - NHNN

Patient 1.: NA (1954): 60 years old female patient suffering stroke 12 month ago. She has a severe left ICA stenosis. As she is eligible for the ECST-2 trial, she was randomised, and entered the optimised medical therapy group.

Patient 2.: MM (1937): 77 years old male patients case was presented in order to review the cerebral imaging for possible diagnoses of cerebral amyloid angiopathy. On the CT left basal ganglia calcification and not haemorrhage was described, while on the MR extensive superficial siderosis on the right with multiple dots of hemosiderin deposition could be detected, but no microbleeds.

Patient 3.: CL (1933): 81 years old male patient who had a transient (45 min.) episode of lower limb weakness in November 2013. He has AF, but declines taking anticoagulant partly because on the previous cerebral MR a small spot was described on the wall of the left lateral ventricle. CT was not performed. The case is presented to discuss/decide the origin of this lesion. Reviewing the MR the opinion of the neuroradiologist was that, the lesion could be a cavernoma, small haemorrhage or dilated vein. Most probably it is a small cavernoma, but it cannot be decided exactly.

Patient 4.: MM (1943): 71 years old male patient with asymptomatic 70% right ICA stenosis considered for the ECST-2 trial. On the 10th of March cerebral MR was performed and it showed bilateral white matter changes and left MCA territory infarction. The right sided ICA stenosis was described on carotid Doppler US. CTA is recommended to verify the diagnoses.

Patient 5.: RB (1937): 77 years old male patient with lots of vascular risk factors, has an asymptomatic 50-69% right ICA stenosis. On cerebral MR extensive white matter changes and signs of small vessel disease were described. Soon this patient will be randomised to the ECST-2 trial.

Patient 6.: US (1963): 51 years old male patient previously fallen off the horse several times. On cerebral imaging microhaemorrhages could be seen at the level of the lingual gyrus. He also had some episodes of stereotyped visual disturbance in the right field of vision, which could be simple partial seizures. DSA was recommended to rule out vascular malformation.

Patient 7.: RDSC (1947): 66 years old male patient with several strokes before. On the 14th of March he was admitted because of VBI symptoms. Cerebral imaging showed basilar thrombus, thrombectomy was performed. Follow up MR (DWI) showed lesion in the right side of the pons and in the left paramedian vermis. Anticoagulation was recommended, with LMWH supplementation in the first days of warfarin administration.

Patient 8.: GN (1964): 50 years old male patient was found on the floor, with left hemiparesis, preceded by vomiting and headache. Cerebral CT showed right sided large MCA territory infarction, with thrombus in the right terminal ICA segment and MCA. CTA showed right ICA occlusion, with no sign for dissection and non-stenotic plaque at the level of left carotid bifurcation. Follow up CT showed subacute large MCA infarction. The opinion of the neuroradiologist was that further imaging regarding dissection should be considered. Base on this case possible genetic background of brain oedema was highlighted.

04.04.2014: Reading the literature: An Atlas of epilepsy, D. F. Smith.

07.04.2014: MDT Meeting - UCLH

Patient 1. OP (1939): 75 years old male patient with asymptomatic > 90% right ICA stenosis. On the left side CTA revealed 50-59% ICA stenosis, Cerebral CT was normal. This patient will be operated.

Patient 2.: SJ (1943): 71 years old female patient who has had right sided symptoms (facial droop, speech difficulty, hemiparesis) two times in the last 2 weeks. Cerebral CT showed subcortical old infarction. Carotid Doppler showed left sided 50-59% ICA stenosis, CTA also showed 50-70% left ICA stenosis. The patient is on aspirin. The last TIA was in the last 48 hours, now the patient is symptom free, therefore she will be operated tomorrow.

Patient 3.: SS (1949): 65 years old female patient was admitted because of right facial droop. On examination the doctor on duty saw left facial droop. She had no other symptoms. Carotid Doppler showed less than 50% ICA stenosis, hence no intervention is recommended.

Patient 4.: MB (1932): 82 years old female patient was admitted because of left sided weakness. Cerebral CT showed old left sided infarction, with no parenchymal changes in the right side. Carotid Doppler showed bilateral 40-49% ICA stenosis. CTA also revealed less than 50% ICA stenosis, and occlusion of one branch of the right MCA. No operation is indicated.

Patient 5.: MJ (1962): 52 years old smoker male patient was admitted because of right sided hemiparesis. He was thrombolysed, but not improved. Cerebral CT showed left capsular and insular infarction, CTA showed hyperdense left MCA, and significant stenosis caused by heterogeneous plaque at the level of the carotid bifurcation as well. The opinion of the team was that after 2 weeks operation –endarterectomy – might be considered.

08.04.2014: Reading the literature: An Atlas of epilepsy, D. F. Smith.

09.04.2014: Reading the literature: An Atlas of epilepsy, D. F. Smith.

10.04.2014: MDT Meeting - NHNN

Patient 1.: SG (1958): 56 years old male patient was admitted because of right sided arm weakness, speech difficulty, swallowing problems and mild facial droop. Cerebral CT showed left subacute MCA infarction and hyperdensity at the level of the 3rd ventricle, most probably a cholesteatoma, which does not causes hydrocephalus. CTA revealed left MCA branch occlusion and bilateral ICA occlusion. Carotid Doppler showed the same bilateral ICA occlusion. Dual antiplatelet therapy was recommended for three months and lipid lowering therapy.

Patient 2.: RU (1926): 88 years old male patient was admitted because of transient dysphasia. CTA showed soft plaque at the left CCA, and calcified, but not ulcerated plaque causing approximately 70% ICA stenosis on the left side. Cerebral MRI will be performed, and the patient will be randomised to the ECST-2.

Patient 3. MM (1949): 65 years old male patient considered for ECST-2 was already discussed 1 week ago. Now we are checking the CTA, which shows $\geq 50\%$ right ICA stenosis.

Patient 4.: SJ (1939): 75 years old female patient in the ECST-2 for 23 month on medical therapy, had 2 episodes of partial visual loss, which lasted for a few seconds. The question is whether this should be considered failure of the medical therapy and operation should be offered? She has 70% ICA stenosis on the right and 90% ICA stenosis on the left side. Cerebral MR was performed on the 9th of April, and this is compared with the MR performed two years ago in 2012. The opinion of the neuroradiologist was: there is not convincing evidence of new infarcts, therefore the team considered that probably the medical therapy should be continued.

Patient 5.: TA (1969): 45 years old male patient was admitted because of left sided basal ganglia haemorrhage. Cerebral imaging CT and MRI, revealed also right sided microbleeds. The case was presented in order to decide whether this patient needs DSA or not? The opinion was DSA should be performed after 6 weeks.

Patient 6.: XY (1972): 42 years old male patient was admitted because of drowsiness, nausea, vomiting. Cerebral CT revealed right basal ganglia haemorrhage. After few days the patient was mobilized, he collapsed and respiratory arrest also occurred. Examinations revealed bilateral pulmonary embolism, and hyperdense left MCA. He was thrombolysed. Over night the pupils became dilated, therefore new cerebral CT was preformed, which showed total left MCA territory infarction and almost total right MCA territory infarction.

Patient 7.: MM (1977). 37 years old male patient was treated because of large right MCA infarction. The case is presented to decide whether dissection could be the cause of the stroke? CTA showed distal occlusion of the MCA. The opinion of the team was that, vasculitis should be ruled out, and imaging with dissection protocol should also be done.

Meeting with Prof. Brown, Mr. Richards and Ifan Jones, and discussing details on the TCD project.

11.04.2014: Reading the literature: Nerve and muscle, R.D. Keynes and D.J. Aidley.

14.04.2014: Reading the literature: Nerve and muscle, R.D. Keynes and D.J. Aidley.

15.04.2014: Special leave.

16.04.2014: Special leave.

17.04.2014: Special leave.

22.04.2014: Reading the literature: An Atlas of epilepsy, D. F. Smith

23.04.2014: Reading the literature: An Atlas of epilepsy, D. F. Smith

24.04.2014: MDT Meeting - NHNN

Patient 1.: MB (1949): 65 years old male patient was treated before because of left arm numbness, pins and needles. At that time, cerebral imaging revealed subarachnoid haemorrhage. Later during follow up imaging, MR performed on the 10th of June 2013 unilateral convexity superficial siderosis was seen, the cause being unclear. Last MR performed on the 28th of March 2014 showed some accumulation in the sulci suspicious for bleeding. The opinion of the team was that, lumbar puncture should be performed, and if it turns out normal, then angiogram should be considered.

Patient 2.: EM (1951): 63 years old heavy smoker female patient was admitted on the 21st of April because of right sided facial droop, right sided arm weakness and dysphasia. Cerebral CT revealed left sided subacute infarction, CTA showed left ICA occlusion from the bifurcation with backward re-filling, and focal stenosis at the origin of the left subclavian artery. The decision of the team was that CTA should be repeated after 6 weeks.

Patient 3. MC (1941): 73 years old female patient with breast cancer in the previous history was admitted because of dizziness. Cerebral imaging, MRI performed on the 23rd of April showed acute right sided parieto-occipital haemorrhage and a small old bleeding in the right basal ganglia, and small haemorrhage also in the pons, which does not seem to be a cavernoma. The decision was that the MRI should be repeated after a few months.

Patient 4.: RDG (1971): 43 years old male patient was admitted because of left sided hemiparesis. Cerebral imaging revealed right sided basal ganglia bleeding. Four family members of the patient had already cerebral haemorrhage before. This case is presented in order to discuss about the possible underlying causes. The decision was that, further examination is required to rule out Fabry's disease.

Patient 5.: JM (1959): 55 years old female patient had migraine and aneurysm coiling before. Her case was presented at the meeting in order to decide the pituitary abnormality, suggested before as a bleeding. Comparing two cerebral MRs, as the lesion did not change, the opinion of the neuroradiologist was that the pituitary hyperintensity definitely is not a bleeding, hence does not need any further imaging.

Patient 6.: GA (1924): 90 years old male patient was admitted because of confusion. On cerebral imaging small right sided subdural haematoma was suspected. This case was presented in order to decide whether there is subdural haematoma or not? Reviewing the imaging the opinion of the neuroradiologist was that, based on a small asymmetry, small hygroma might be possible.

25.04.2014: Reading the literature.

28.04.2014: MDT Meeting- UCLH

Patient 1.: WD (1941): 73 years old male patient had two TIAs before, speech difficulty and upper limb weakness in November 2013 and arm weakness in January 2014. Cerebral CT showed multiple vascular lesions. CTA showed 70% left ICA stenosis. Carotid Doppler showed 90-99% left ICA and 50% right ICA stenosis. MRA showed in addition left vertebral artery stenosis at the origin.

Patient 2.: EDR (1991): 23 years old female patient was examined after a loss of consciousness, developing slight left sided weakness and ataxia afterwards. Cerebral CT was typical for a perinatal insult, margins of the lateral ventricles being deformed, around the left frontal horn with hypodensity and hypodens right basal ganglia. CTA was unremarkable. Cerebral MR showed very little white matter, raising the suspicion that the white matter probably never developed.

Patient 3.: PL (1957): 57 years old male patient was admitted because of left hemiparesis. Parallel with the stroke the patient suffered also AMI. On the cerebral CT large right MCA territory infarct was seen. CTA showed 50% right ICA stenosis. No intervention is recommended at the present.

Patient 4.: BP (1928): 86 years old male patient was admitted because of left sided hemiparesis. Cerebral imaging showed right sided large MCA territory and right thalamus infarctions. On native CT clot could be detected in the right ICA and MCA. CTA showed right MCA occlusion, occlusion of the right posterior communicating artery, and suggested intraluminal floating thrombus at the carotid bifurcation or dissection. The conclusion was that carotid Doppler US would help in deciding the answer.

Patient 5.: NB (1970): 44 years old female patient has had left sided weakness and visual problems at the age of 19. She is not a smoker. Now she was admitted because of sudden visual disturbance, characterised with dissociated eye movements and mild left sided weakness. Cerebral MR showed small right cerebellar and right thalamus infarctions, both of them being old. No acute ischemic lesion could be detected. However some artefacts were seen in the pons. For this reason later the MR should be repeated.

Patient 6.: RB (1927): 87 years old female patient was examined because of left sided transient (20 min.) weakness. After a few hours the patient experienced again left sided weakness. Cerebral CT showed hyperdens right MCA. She was thrombolysed. CTA revealed calcified 50% right ICA stenosis. Because of AF she is on warfarin therapy. The decision was that carotid Doppler should be performed and vascular surgery consultation is needed.

29.04.2014: Reading the Manuals for the Doppler Box X, for routine examination and monitoring.

30.04.2014: Participating at the ESC practise session: 3 presentations:

1. Modified Rankin score at four years in the international carotid stenting study in patients experiencing an outcome event
R.L. Featherstone
2. Long-term outcome after stenting versus endarterectomy for symptomatic carotid stenosis: a metaanalysis of individual patient data. D. Calvet
3. Comparison of the prevalence of carotid artery ulceration on computed tomography angiography (CTA) and contrast-enhanced magnetic resonance angiography (CEMRA) F. Kennedy

Completion of the course: ‘Introduction to Good Clinical Practice (GCP) e-learning course. A practical guide to ethical and scientific quality standards in clinical research’.

May

01.05.2014: EEG Clinic - UCLH

Patient 1.: RZ (2014): 2 months old infant who was premature, born at 24 months. She had on the 28th of March an EEG, which at that time was normal. She had some kind of seizures on the 21st of April. On cerebral MR extended left sided infarction was described after haemorrhage. Because of the suspected seizures new EEG was requested. During the examination, she had some irregular limb movements, which were not typical for epilepsy. However on the EEG sharp waves were detected which were consistent with the left sided infarction, sustaining the evidence of epileptic activity. On EEG there were also some periods of “delta brush”.

Patient 2.: LT (2013.): 18 month old male baby had an overnight EEG. Report: The background is normal; however there were some runs of spike and waves with right sided emphasis, consistent with right sided partial epilepsy.

Patient 3.: IR (2012): 21 month old female patient had an EEG because of previous seizures like episodes. The EEG recording showed no abnormality.

Patient 4.: RR (1988): 25 years old female patient had a sleep deprived EEG. Report: The record is similar to the previous one with a normal background, but occasionally temporal sharpened slow activity can be observed. This is of borderline but not definite significance. There is therefore no evidence for supporting epilepsy.

MDT Meeting - NHNN

Patient 1.: CP (1926): 88 years old female patient was admitted because of headache and ataxia. On admission new atrial fibrillation was detected. Cerebral CT showed right posterior circulation infarct, CTA showed occlusion on the right PCA. Cerebral MR examination showed no lesion in the brainstem, and no evidence of vertebral dissection.

Patient 2.: PS (1958): 56 years old female patients has had previously left hemisphere ischaemic stroke secondary to ICA stenosis, undergoing CEA in 2012. Now she presented with progressive right limb weakness over 2 weeks. CTA suggested re-stenosis at the site of previous CEA. Dual antiplatelet therapy was suggested. Cerebral MR showed left sided infarction. CTA showed fresh clot in the left ICA. Carotid Doppler examination, plaque analysis with MRA and cardiological examination was recommended.

Patient 3.: HR (1958): 55 years old female patient was admitted because of left sided hemiparesis. Cerebral CT showed right parenchymal bleeding in the internal capsule and small infarction in the head of the caudate nucleus. CTA showed no vascular abnormality. Cerebral MR was recommended.

Patient 4.: AR (1970): 44 years old male patient suffered road traffic accident (RTA) 1 week ago with head injury. He presented several days after the RTA with neck pain, dysarthria, significant executive dysfunction and lowing mood. On the cerebral MR there was no infarction or dissection. His case is presented to discuss the aetiology of the symptoms, whether could be caused by diffuse axonal injury or dissection? EEG recording showed some nonspecific slowing, while CSF was normal. MRA and CTA showed soft plaque at the bifurcation, but with no signs of dissection. In T1 sequence the plaque is hyperintense. T1 sequence is recommended for evaluating the carotid sinuses, and carotid Doppler is also recommended.

Patient 5.: BR (1927): 86 years old female patient with atrial fibrillation and coronary stenting in the previous history. She was admitted for left sided hemiparesis on the 24th of April. She was thrombolysed and her deficit resolved. Cerebral CT showed small infarction in the right basal ganglia, CTA showed clot in a short segment of the right MCA, and approximately 30% stenosis at the right ICA. Doppler showed less than 50% ICA stenosis bilaterally. The cause of stroke is likely to be cardioembolic.

Patient 6.: RA (1964): 49 years old male patient who has had RTA with nerve root avulsion in 1979. He developed myelopathy in 1988, myelogram at that time showed epidural collection, and he underwent laminectomy. Since that he experienced progressive ataxia. The latest head and spine MRI showed multiple epidural collections, cord tethering, atrophy and probably cervical AVM. He has superficial siderosis, and multiple causes for that: head injury, root avulsion, probably spinal dural tear, intradural surgery and possible AVM. The case was presented in order to decide whether cervical DSA and myelography are required to look for possible bleeding source. The opinion of the neuroradiologist was that sometimes the cause o superficial siderosis cannot be found. TWIST and TRICKS MRI techniques from the cervical region are recommended to evaluate the presence of an AV shunt.

Patient 7.: RDG (1971): 43 years old male patient with hypertension in the previous history. As vascular risk factor smoking can be mentioned as well. He was admitted for left sided hemiparesis. The patient admitted that in the last days before

the admission he did not take his antihypertensive drugs. Cerebral CT showed right sided basal ganglia haemorrhage, CTA showed tortuous fusiform basilar artery. The case was presented in order to discuss about the aetiology of the bleeding. DSA was recommended later to be performed.

Patient 8.: ES (1962): 51 years old male patient was admitted because of left sided basal ganglia haemorrhage. Case was presented for discussion regarding the aetiology. Cerebral CT showed large left sided parenchymal bleeding with midline shift. The patient was reported to be agitated in the present. When the patient becomes calm, CTA and early DSA are recommended to elucidate the origin of the bleeding.

Patient 9.: LF (1963): 50 years old female patient with no serious diseases in the background. Previously she was monitored for possible high BP, but never had to be treated. Now she was admitted because of dysarthric speech, left sided weakness. Cerebral CT and MR showed large right sided basal ganglia haemorrhage. On CTA a vessel is suspected as the origin of the bleeding, but it couldn't be identified on the MRA. MR also showed small infarction in the pons. DSA was recommended to be performed in order to elucidate the aetiology after one week.

Patient 10.: MB (1943): 71 years old male patient with transient episodes of right arm weakness. Cerebral MR showed bilateral infarctions of different size. CTA showed critical right ICA stenosis, with milder stenosis on the left ICA as well. Carotid Doppler was recommended as soon as possible before decision making.

Patient 11.: PR (1934): 79 years old male patient with COPD was admitted because of exacerbation of COPD and worsening right leg weakness on the background of previous stroke. Cerebral MRA (time of flight) suggested right vertebral dissection. Reviewing the scans the opinion of the neuroradiologist was that, not dissection but stenosis of the right vertebral artery can be detected.

Patient 12.: MY (1964): 50 years old male patient presented with left sided headaches, first one during coitus. Cerebral MR showed multiple patchy infarctions in the left borderzone territory. MRA showed that the left ICA is very thin compared to the right one. The question is whether dissection could be the aetiology? Based on the MRA cannot be decided whether dissection or not is causing the symptoms. CTA is recommended.

02.05.2014: Annual leave.

06.05.2014: Reading articles on previous studies on microemboli detection with TCD and plaque analysis with MRA.

Meeting with Dr. Rolf Jager: discussion about the TCD project and plan, and protocol of the SHIP trial.

07.05.2014: Practicing on the TCD device. Reading the book "Aids to the Examination of the Peripheral Nervous System".

08.05.2014: EEG Clinic - UCLH

Patient 1.: CL (2010): 3 years old female patient who had allergy in the previous history and developmental delay. She has had an EEG before, which was normal. During the present EEG monitoring there was no seizure, the background was normal, however there were some moving artefacts, and there were also some normal changes during sleeping. Report: There is fairly frequent mainly right occipital spike wave activity which is consistent with partial epilepsy. There was no evidence of seizure activity.

Patient 2.: HE (1928): 86 years old male patient with diabetes mellitus, stroke and VP shunt in the previous history. Now he was admitted because of repeating seizures. At admission hypoglycaemia was observed, which could be the cause of the seizure. EEG examination was performed, during this the patients was sleepy. Report: There is frequent generalizes slowing, which could be due to drowsiness. There is no evidence of epileptic activity. There is no definitive abnormality.

Patient 3.: TO (1997): 15 years old female patient who has had some psychiatric problems previously, being on medication in the present as well. During the EEG monitoring the record is marred by muscle artefacts, however some left temporal sharp activity was recorded, which might be related to the fluoxetine (which could be giving rise to partial epilepsy). Before the definitive conclusion a sleep deprived recording will be needed.

MDT Meeting - NHNN

Patient 1: AP (1934): 79 years old male patient who has had some transient ischemic attacks in the previous month, characterised by cerebellar type symptoms. After the first TIA antiplatelet therapy was initiated, but despite these the TIA repeated, and the patient was admitted to the Hyperacute Stroke Unit on the 4th of May. The CTA was compared to the CTA performed few weeks ago during the first TIA (19th of April). The first CTA showed no filling of the right vertebral artery, however there was a tiny filling on the top of the artery, with retrograde filling from the contralateral side. The second CTA showed that the right vertebral artery occlusion has extended within the V4 segment to just proximal to the anastomosis to the basilar artery. There was filling defect within the distal vessel in keeping with a propagating thrombus. The left vertebral artery remained patent, though there was a minor narrowing at the origin from the left subclavian artery. The final conclusion was distal extension of the right vertebral artery occlusion, with no other changes. The carotid system was unremarkable on both examinations and CT showed mild widespread small vessel disease. Anticoagulation was initiated after the current admission.

Patient 2.: OJ (1966): 47 years old female patient with sickle cell and malaria in the previous history was admitted because E coli urosepsis. Few days ago she has had intractable seizures, developing epileptic status. Cerebral MR showed some white matter changes in the right side, with occipital and parietal oedema. Although she is not known as having hypertension the images suggest PRES - posterior reversible encephalopathy syndrome. During MR with gadolinium there was no enhancement in the territory of the oedema. In the present the patients is well, the clinical picture is good and promising. Follow-up imaging was suggested after a few weeks. Based on this case the following facts were highlighted: antimalarial drugs can provoke seizure, sepsis can lead to PRES even without high blood pressure.

Patient 3: PB (1960): 53 years old male patient who has had herpes zoster previously. He was tested for HIV, and it was negative. Lumbar puncture was also performed, and it revealed 17 lymphocytes (slightly elevation which could be caused by the stroke as well). CT performed on the 5th of May showed hypodensity in the right basal ganglia, without hyperdens sign in the vessels. CTA was unremarkable at the lower part of the ICAs (neck region), however bilateral narrowing in the cavernous sinus was observed, left MCA, the vertebral aa. and basilar a. were all normal. Cerebral MR showed right basal ganglia infarction. DWI showed well defined lenticular territory infarction. On post-contrast imaging there were little dots at the bottom of the lesion. Based on the above facts vasculopathy or vasculitis can be a possible cause or a transient right M1 occlusion due to a cardiac thromboembolism could also cause this event.

Patient 4.: RG (1932): 81 years old female patient was admitted because of right sided hemiparesis. On the first cerebral CT scan (03.05.2014.) arachnoidal cyst was detected at the left temporal pole, lacunar infarction was described in the left basal ganglia, in the M3 intravascular thrombus was seen. CTA showed calcified narrowing complex at the carotid bifurcation bilaterally, more severe at the left side. She was thrombolysed. Follow up CT performed at 05.05. showed cortical infarction in the left hemisphere, and cortical infarction at the right cerebellum. Cerebral MRI performed 5 days later (08.05.) showed several cortical infarcts in the left ICA territory.

Patient 5.: PC (1943): 70 years old female patient, whose present complaints started with left sided chest pain. Afterwards she developed slurred speech, left arm weakness and hemianopsia. Atrial fibrillation was also detected. Cerebral CT performed showed hyperdens terminal right ICA. CTA showed unremarkable carotid bifurcations, right terminal ICA blockage caused by

clot, however the right M1 part was patent. She was thrombolysed, and her symptoms improved. Later on that day the symptoms repeated again, therefore thrombectomy was considered, and therefore the patient was transported to the UCLH. At arrival her NIHSS was 4. MR was performed and it showed anterior choroid artery territory infarction on the right. DSA was performed, and it showed occlusion of the right terminal ICA, DSA also showed that the patient has good collaterals which supply the right side. Since the admission she had some blood pressure fluctuations with tendency to hypotension. As the patient's symptoms were mild at arrival, and as the risk of embolectomy was high, thrombectomy was not performed. To avoid the BP drops noradrenalin was administered.

Patient 6.: AM (1945): 68 years old male patient with hypertension and diabetes mellitus in the previous history, was admitted because of reduced GCS and dense right sided hemiplegia. Acute stroke CT showed left sided basal ganglia bleeding, with mass effect and midline shift. CTA showed unremarkable left carotid bifurcation. Cerebral CT was repeated one day after the admission, and it showed hypertensive type haemorrhage and signs for small vessel disease. The conclusion of the neuroradiologist was that, the patient does not need any further examinations (e.g. vascular angiograms) because there was no sign for vascular malformation on the CTA performed earlier.

09.05.2014: ENG/EMG Clinic –NHNN:

Patient 1.: CA (1946): 67 years old male patient with diabetes mellitus since 1995. In the previous history nephrotic syndrome was also present. The patient present medication include: immunosuppressant (for kidney), insulin, metformin, previously he also had some cortisol injection for the kidney disease as well. In 2010 ENG examination revealed polyneuropathy, which is probably related to diabetes. His present complaints started in October 2013 with weakness of the lower limbs especially feet, in the last weeks/months needing a walking stick. On inspection severe oedema of the lower limb could be detected. ENG and Sympathetic Skin Response test was also performed. ENG showed axonal sensory-motor PNP, which was slightly more severe than it was 4 years ago (this could be due a technical error because of the severe lower limb oedema), however on the upper limbs ENG was almost the same as it was before. Sympathetic skin response testing the small fibres revealed to be normal.

Patient 2.: NT (1948): 65 years old female patient complains of numbness affecting both lower limbs, and sensation of pins and needles in all five fingers of the left hand. The patient does not have diabetes mellitus. ENG examination and Sympathetic Skin Response test were performed, and they did not reveal any abnormality.

Patient 3.: SA (1987): 27 years old male patient complains of pain and weakness of both arms (left worse than right). The pain character is "pressure", and it did not change in intensity during the last 2.5 years. Sometime the patient has the feeling that his arm is flexing involuntarily. He denies any sensation of pins and needles, numbness or neck pain. On examination there is no motor function loss. ENG reveals a very mild carpal tunnel syndrome bilaterally, which is inconsistent with the patient's complaints. Detailed EMG examination of the left upper limb was also performed (including the following muscles: First dorsal interosseous, Extensor digitorum communis, Extensor carpi radialis longus, Biceps brachii, Triceps brachii, Deltoid, Pronator teres), but it was unremarkable.

Patient 4.: HR (1964): 50 years old male patient, who was complaining of stiffness and pain of the muscles for 8 months now. First the left lower limb was affected, thereafter the right lower limb (presently the sensation is equal), and for the last 2 weeks same sensation appeared on the forearms. On examination un-sustained bilateral Achilles clonus was present, with no Babinski sign. Both ENG and EMG examinations were performed, no abnormality was showed. During this examination the importance of the Abductor pollicis brevis muscle was highlighted in diagnoses of myotonia.

Patient 5.: LS (1960): 54 years old female patient who has had hypertension from September 2013. Now she complains of ascending type pins and needles and tingling in both lower limbs. Sometimes she feels transient pins and needles in the tip of all fingers on both hands, but otherwise she has no constant problems with the upper limbs. Previously she was suspected as having transvers myelitis, but spinal MRI could not reveal any abnormality, and lumbar puncture could not be performed. Since the suspicion of the myelitis she has also bowel and bladder problems, in terms of urinary incontinency and urge stimuli for defecation. ENG and detailed EMG examination was performed, involving the lumbar paraspinal muscles, and no abnormality was detected.

12.05.2014: Day Surgery Unit - UCLH

Patient 1: EP (1932): 82 years old female patient who had a metallic aortic valve replacement 18 years ago, since then being anticoagulated with warfarin. On the 6th of April 2014 she has had a transient left arm weakness. Examinations of the carotid system revealed that she has a right sided 50-59% ICA stenosis caused by a calcified, non-ulcerated plaque, while on the left side irregular, non-ulcerated, partly calcified plaque was also detected, causing 50-59% ICA stenosis. Today the patients will undergo right endarterectomy. Before the operation microemboli detection with TCD examination is planned. There was good temporal bone window bilaterally. Monitoring could be done for 15 minutes, as the patient had to be prepared for the intervention by the anesthesist.

MDT Meeting - UCLH

Patient 1.: GW (1924): 90 years old male patient , who was admitted because of right arm weakness. The paresis became dense one day after the admission. Cerebral CT performed on the 5th of May showed acute infarction in the left hemisphere and also borderzone ischemia on the left. CTA revealed ulcerated left ICA plaque, which causes approximately 60% stenosis. Carotid Doppler showed right sided 40-49% ICA stenosis, and approx. 50% stenosis on the left. This patient had a CTA in 2011, comparing the images with the previous ones, the neuroradiologist concluded that the left sided ICA stenosis did not change during the last 3 years. The consensus was that this patient should not be operated because of several reasons: old age, high operation risk, not rapid progression of the left ICA stenosis. However cerebral MR was suggested in order to define the age of the borderzone infarction.

Patient 2.: EG (1923): 90 years old female patient was admitted because of left sided hemiparesis. Iv thrombolysis was performed, but the patient symptoms did not change. On the 12th of May the follow up CT showed right sided MCA infarction, CTA showed 50-70% right ICA stenosis, which on the carotid Doppler was estimated to be 50-59%. On the left side there was no significant stenosis. In the present the patient's symptoms are severe, operation should be considered in the future if the patient improves.

Patient 3.: CA (1935): 78 years old male patient was admitted because of right sided homonymous hemianopia. Cerebral CT revealed left occipital (PCA territory) infarction and left cerebellar (AICA territory) infarction. Atrial fibrillation was also detected on examination. CTA and Doppler showed a small insignificant plaque in the left ICA and thrombus in the left vertebral artery. Based on the above embolic origin is suggested.

Patient 4.: PCT (1928): 85 years old male patient, who has had an asymptomatic 50% right ICA stenosis for more than 5 years. The last CTA performed few weeks ago showed progression of the stenosis (>70%), though the patient is still asymptomatic. Because of cardiologic recommendation the patient is anticoagulated with warfarin. As the plaque seems to be ulcerated, this is why he was suggested for the ECST-2 trial.

13.05.2014: Writing the amendment for the SHIP trial protocol and patient information sheet.

14.05.2014: Writing the amendment for the SHIP trial protocol and patient information sheet.

15.05.2014: EEG Clinic - UCLH

Patient 1.: KM (1926): 88 years old male patient had to be resuscitated after cardiac arrest. The resuscitation took approx. one hour, the patient probably suffered hypoxic brain injury. EEG performed on the 12th of May showed status epilepticus, Diazepam was started, and the therapy later was completed with levetiracetam and phenytoin. Since then continuous EEG monitoring was requested. On the 14th of May the EEG showed some improvement.

Patient 2. WD (2008): 6 years old male patient has had some episodes of seizures. EEG performed on the 15th of May showed runs of sharp waves.

Patient 3.: KH (1985): 29 years old male patient was referred to the Neurophysiologic Department because on episode of collapse, being amnesic to that event. EEG did not show any definite abnormality.

Patient 4.: CJ (2012): 2 years old female patient with 1p21.3 microdeletion syndrome, with dysmorphic features. She was found one morning not responding, not moving, being stiff for a few minutes, becoming responsive shortly after that. 24 hour EEG monitoring report: there are some fronto-temporal epileptiform activity. This could indicate some cortical dysfunction, which is not necessarily epileptogenic, but equally could be consistent with partial epilepsy.

Patient 5.: MR (1998): 15 years old female patient, who has had two episodes of memory loss in December 2013 and one in January 2014. During the present EEG monitoring there are frequent runs of rhythmic notched theta activity which are probably a normal variant. However on the record, there are new additional temporal changes, most clearly on the left, which are consistent.

Patient 6. HM (1999): 14 years old male patient was referred to the Neurophysiologic Department because of one short episode of inattention. EEG recording was within normal limits.

TCD examination: EG (1923): 90 years old female patient was admitted because of left sided hemiplegia. Cerebral CT and CTA showed right MCA / M1 occlusion. I tried to perform TCD examination, but I failed due to lack of proper bone window.

MDT Meeting - NHNN

Patient 1.:AH (1932): 81 years old female patients was admitted because of right sided hemiparesis and facial droop. At admission AF was also detected. Carotid Doppler examination showed tight left sided ICA stenosis. CTA showed right sided ICA occlusion and 80% stenosis at the left ICA. CTA also showed bilateral posterior communicating artery aneurisms and aneurism of the top of the basilar artery. If the patient will improve, later endarterectomy might be considered.

Patient 2.: HF (1931): 82 years old male patient was admitted because of dysphasia. The patient is right handed. Carotid Doppler ultrasound showed bilateral significant high mixed echogenic plaque (predominantly calcified) noted within the distal CCA extending into the carotid bifurcation. The increased velocities measured in the ICAs suggest 50-59% stenosis bilaterally. On the left side there is retrograde flow component noted in systole within the vertebral artery, indicating presence of a significant proximal stenosis and partial steal syndrome. There are raised velocities noted in the proximal subclavian artery suggesting at least 50-74% stenosis. As the patients had elevated creatinine level, during the cerebral CT imaging, contrast couldn't be given. On the 13th of May cerebral MR was performed which showed evidence of small vessel disease, and also white matter lesions around the ventricles.

Patient 3.: HM (1956): 58 years old female patient admitted because of a bleeding situated at the right side of the brainstem, involving partly the right side of the cerebellum. She has had MR and CT imaging also. The case was presented in order to discuss whether on the images there is any suspicion of cavernoma or AVM. CTA was normal, without any sign for AVM. MRA imaging after 6 weeks was suggested.

Patient 4.: PW (1956): 58 years old male patient with AF was admitted because of right sided weakness. Cerebral CT was suggestive of multiple cerebral infarcts, CTA showed significant right sided ICA stenosis (being asymptomatic at the present). This patient has had a cerebral CT scan in 2010, which showed left hemispherical acute stroke and borderzone infarction at that time. Cerebral MR (02.05.2014) DWI showed acute left sided infarction. Because of the right sided ICA stenosis, this patient will be followed up by vascular surgeons also.

Patient 5.: HP (1961): 52 years old female patient who was admitted because of left sided hemiparesis and headache. Cerebral CT showed right sided occipital haematoma with intraventricular extension and also some subarachnoid component. She also had a DSA, which showed AVM.

Patient 6.: DB (1968): 45 years old female patient developed severe migraine-type headache in February 2014. Cerebral CT (14.02.2014) showed right sided parietal infarction. Cerebral MR (21.03.2014) also showed right sided multiple small infarctions. CTA showed soft atheroma of the right carotid sinus, with no signs of dissection. CSF examination was normal. Vasculitis was suspected, therefore steroids were administered, but as the patient's symptoms worsened it was stopped after a few days. Based on the cerebral imaging vasculitis was excluded.

Patient 7.: PM (1964): 50 years old female patient with diabetes mellitus and polyneuropathy in the previous history. Cerebral imaging performed in 2009 showed ischemic lesion in the left side of the brainstem (pons). Cerebral MR repeated in 2013 showed several lesions in the pons and progression of the process to the cerebellar peduncle and thalamus. Last cerebral MR was performed on 28.04.2014 which showed the lesion described previously and in addition a small haemorrhage in the right side of the pons and also changes characteristic to small vessel disease. The opinion of the neuroradiologist was that the lesion might be some kind of cystic degenerative process, which has to be followed up.

Patient 8.: TR (1973): 40 years old male patient, who had some episodes of focal weakness in the last year. CT showed subcortical stroke. CSF examination, genetic testing for Fabry's disease and CADASIL were performed, and were negative, HIV was also negative. The patient had an episode in December and another in January. Cerebral MR performed at 06.05.2014 showed multiple infarctions in the thalamus, basal ganglia, internal capsule, without any lesions in the cerebral cortex. The patient has had also back pain, but presently no imaging about the spinal column is available. The aetiology is still unclear, mitochondrial disease can be one option, further examinations are needed.

Patient 9.: AO (1985): 29 years old male patient was admitted because of right sided hemiparesis. Cerebral MR showed left sided small infarction, MRA showed narrowed left ICA. Lately the patient has started to have involuntary movements, mainly on the face and hand. The aetiology of the stroke is still unknown, perfusion imaging is recommended and presentation to Professor's Brown MM clinic.

Patient 10.: BH (1937): 77 years old male patient with AF on warfarin, developed dysphasia on the 30th of January 2014. Cerebral MR showed left sided parenchymal haemorrhage and also ischemic lesion not related to the bleeding. Anticoagulation was stopped. On the 14th of May he experienced again dysphasia and limb weakness. Cerebral MRI DWI did not show any acute ischemic lesion, and there was no bleeding. CTA was also normal. As he has siderosis, which is a risk factor for bleeding, aspirin is not given. EEG monitoring and follow up were recommended.

16.05.2014: Reading the literature.

19.05.2014: Day Surgery Unit – UCLH:

Patient 1. : WD (1941): 72 years old male patient with hypertension and hyperlipidaemia in the previous history. The patient was a smoker, but for several years he quit smoking. In April 2014 he experienced transient weakness of the right upper limb 3 times, which was accompanied with speech difficulty one time. The carotid Doppler examination performed on the 14th of April 2014 revealed borderline 50% ICA stenosis on the right side, and irregular heterogeneous (predominantly) soft plaque at the proximal part of the ICA, which causes 90-99% stenosis. The right sided increase velocity could be due to slight kinking noted in this region, or due to the contralateral tight stenosis. Due to a poor right temporal bone acoustic window microemboli detection could be performed only on the left side. The detection lasted for 1 hour and it was performed before the left sided carotid endarterectomy. During the one hour monitoring the device recorded some embolic signals, however this seemed to be artefacts rather than microembolic signals. Cerebrovascular reserve was also evaluated through calculating the breath holding index. The patient was asked to hold the breath after a normal inspiration for 30 seconds, but without straining. The breath holding time and cerebral blood flow velocities were recorded. The test was repeated twice after 2-3 minutes of normal breathing. The single values and the average of the 3 BHI values showed impaired cerebrovascular reserve capacity. After the microemboli detection I participated at the endarterectomy as an observer. The procedure was performed in local anaesthesia.

20.05.2014: Day Surgery Unit - UCLH: Sample recording – MES detection- of the right MCA, required by the Revacept trial. Reading the literature of TCD and MES detection.

21.05.2014: Queen Square Clinical Trial Centre Workshop for Researchers:

1. Welcome and introductions: Chair - Dr Jeremy Chataway
2. Overview of Queen Square Clinical Trial Centre: Tahera Hussain
3. Overview of drug trial from a pharmacy perspective: Louise Coyle
4. Overview of study design: Zoe Fox
5. Study Set up and Sponsorship: Suzanne Binks
Study Set up for drug trials: Anne Marie Downey
6. Presentation 1: Martina Liechti
7. Presentation 2: Pedro Machado: Inclusion body myositis
8. Overview of UCL CTU: Tahera Hussain
9. Overview of Clinical Research Network and Portfolio Adoption: Amal Qureshi
10. The Wolfson Clinical Research Facility: Edwina Saunders

22.05.2014: EEG/ENG/EMG Clinic - UCLH

Patient 1: QB (4103275): 8 years old male patient with myoclonic twitches on the face. EEG was performed. Report: Recording is normal except for fairly frequent centrotemporal spikes which became more frequent in sleep. Dg: BECTS - Benign partial epilepsy of childhood with centrotemporal spikes.

Patient 2: JO (1934): 80 years old male patient, who has had diabetes mellitus for the past 30 years. He was diagnosed with rectal adenocarcinoma in 2012. The patient refused the operation, but he got chemo- and radiotherapy. His present symptoms started 10 weeks ago with swallowing problems, dysphagia, dysarthria, and proximal limb weakness. The patient is complaining of bilateral and mainly proximal weakness of the limbs. On inspection he has bilateral severe upper limb oedema, and some fasciculation were observed at the level of the left thigh. On examination no disturbance of the sensory system was

detected, muscle strength was normal in the distal part of the limbs, however there was some mild weakness in the proximal muscle groups. ENG/EMG was performed, and it showed severe axonal sensory-motor polyneuropathy, which could be due to the longstanding diabetes. In addition widespread denervation was also detected. This could be consistent with anterior horn cell disease but it could be caused by the neuropathy as well, therefore should be interpreted with caution.

Patient 3: AE (1961): 53 years old male patient who lived a healthy life before performing regular sport (running). His present complaints started 6 months ago with multiple joint pain mainly in the right lower limb, and with right sided foot drop since November 2013. Rheumatologic examination revealed polyarthritis, therefore cortisol injections were administered. For several weeks the patient started to have problems with the left lower limb, in terms that he cannot make distinction between warm and cold water during taking the shower. He also complains of the numbness of the lateral part of the right shin and pain in the right hip. On examination there was no motor function loss. ENG was normal, during EMG examination mild polyphasic potentials were detected when examining the extensor hallucis longus muscle and the iliopsoas muscle on the left side. Soleus H-reflex was also normal.

Meeting with Professor Brown, discussing some details about the TCD project.

MDT Meeting - NHNN

Patient 1: ER (1942): 71 years old male patient, who has admitted for dysphasia six months ago. On cerebral CT cryptogenic left parietal lobe haemorrhage was detected (CTA performed previously in 2012 was normal). The patient recovered since then. His case was presented in order to discuss whether he needs any further imaging aiming to determine the aetiology of the haemorrhage. The decision was to repeat CTA.

Patient 2: RA (1964): 49 years old male patient who has had some head trauma during a car accident previously, and since then he is known to have superficial siderosis. Because of myelopathy he was also operated before. MR examination with TWIST/TRICKS performed previously did not show any dural arteriovenous fistula. The decision of the MDT was that this case does not need any further imaging examination.

Patient 3: MG (1962): 52 years old female patient who experienced thunderclap headache. On CT subarachnoid haemorrhage and right frontal parenchymal bleeding was detected. Recently DSA (15.05.2014) was performed aiming to identify any possible source of the haemorrhage, like aneurysm or cavernoma. On the present DSA there was no evidence of vascular abnormality. The decision of the MDT was that CT and CTA should be repeated after 2 months. Lumbar puncture is also considered.

Patient 4.: AM (1942): 71 years old female patient who has malignant hypertension, was admitted because of right face droop and right arm weakness 2 weeks ago. During hospitalisation she has had several episodes of fluctuating confusion. The question of the consultant was whether there is clear evidence of stroke or these episodes are due to the malignant HT? Cerebral CT performed on the 1st of April 2014 showed R frontal small bleeding, while the current CT shows L parietal infarction. The conclusion was to perform echocardiography for excluding or confirming the heart as a source of emboli.

Patient 5: PB (1931): 83 years old male patient who is a heavy smoker and is consuming alcohol regularly, was admitted because of transient slurred speech and right facial droop. CTA showed left ICA stenosis of 50-70%, while carotid Doppler US showed 60% left ICA stenosis. The MCAs were patent, with no clot. Cerebral MR was also performed, and the DWI showed acute small infarction in the right side. As the patient stroke risk is high, this patient should be considered for left ICA endarterectomy.

Patient 6.: SM (1949): 64 years old male patient who was admitted because of dysphasia. Because of AF he was anticoagulated with marfarin. CT performed on the day of admission 19th of April was unremarkable. When performing cerebral MR on the 20th of May, DWI showed hyperintensity in the midbrain and in the left basal ganglia region. Cerebral MR was repeated on the 21st of May, and it showed acute/subacute infarction in the midbrain and mature lacunar infarction in the left basal ganglia. MRA revealed small origin of the right vertebral artery. The conclusion was that these lesions could be caused either by small vessel disease or cardioembolic stroke.

Patient 7.: EH (1930): 83 years old female patient who was admitted because of left distal upper limb weakness. Newly atrial fibrillation was also detected on examination. Cerebral CT showed right frontal parenchymal hypodensity, which was considered to be an old infarction. Further examination revealed embolic occlusion of the artery supplying the left upper limb, thus concluding that the event is peripheral and not central.

Patient 8.: AM (1941): 72 years old male patient, with several episodes of transient weakness of the right arm was examined. Cerebral CT did not show any acute ischemic lesion, just mild changes characteristic for small vessel disease. CTA however showed calcification and tight narrowing (>70%) caused by a complex ulcerated plaque at the left carotid bifurcation, and mixed plaque at the right CCA bifurcation as well causing tight stenosis (>70%). This patient will be considered for the ECST-2 trial.

BRR Department Meeting: Arterial spin labelling and chemical exchange saturation transfer as new potential tools to assess brain physiology in clinical research

Presentation 1. Dr David Thomas: Measuring cerebral blood flow using arterial spin labelling (ASL).

Presentation 2. Prof Xavier Golay: Chemical exchange saturation transfer

23.05.2014: Reading the literature.

27.05.2014: Participating at the ECST-2 Team Meeting, discussing some aspects of the TCD plan regarding the 6 weeks follow up examination of the patients. Participating at Fiona Kennedy's MD presentation on "Carotid atherosclerosis predicting risk and optimising management" MPhil to PhD Upgrade Viva. Participating at Anne Huibers's MD presentation on "Treatable causes of postprocedural (CEA, CAS) stroke", case presentations.

28.05.2014: Reading the literature. Updating the work diary.

29.05.2014: EEG Clinic - UCLH

Patient 1. KH (1999): 14 years old female patient has had absence seizures since childhood, but she was not treated until now. The present sleep deprived EEG showed: Appearances are consistent with left temporal partial epilepsy. There are no appearances of an idiopathic generalizes epilepsy.

Patient 2.: NH (1983): 30 years old female patient was referred to the Neurophysiology Department after a collapse, during which she suffered a facial trauma. She could not remember the circumstances of the event. Cerebral CT and MRI were normal. EEG was performed, and it was normal.

Patient 3.: KA (1929): 85 years old male patients was referred to the Neurophysiology Department, after multiple unresponsive episodes, which lasted approximately for 10 minutes. The patients hasn't had stroke in the previous history. Although during the EEG recording the patient had one similar unresponsive episode, the EEG was within the normal limits for age. During the recording the patient was clearly drowsy.

Patient 4.: MS (1941): 73 years old female patient with diabetes mellitus in the previous history, few days ago she was found at home, being unresponsive. The patient does not remember anything of that specific morning. EEG was performed, during the examination the patient was very anxious. EEG report: The recording has some left temporal slowing, which suggest a cortical dysfunction, and could be consistent with a stroke. There is some rhythmic additional sharpened alpha superimposed of uncertain rather than definite significance. Sleep deprived EEG is recommended.

Patient 5.: MRL (1999): 15 years old female patient, known to have a primary generalizes epilepsy for two years, being treated for that, was referred to the Neurophysiology Department for a follow up EEG. The EEG performed was normal.

EMG Clinic - UCLH

Patient 1.: LJ (1984): 30 years old female patient who has had Guillain Barre Syndrome (GBS) 10 years ago. At that time she was bedridden for 6 months, but after that she fully recovered. She was referred to the Neurophysiology Department because of complaining decreased sensation, tingling, peens and needle sensation at the lateral border of the right foot, and right 5th digit for about 1 month, and transient burning sensation in the palms during the night. She also complains of general weakness since the beginning of these symptoms. On examination there was no muscle weakness, and hypaesthesia could be detected at the level of the right superficial peroneal nerve and small region of the ulnar distribution of the right hand. ENG examination was normal, it showed that the nerves had fully recovered after the GBS, leading to the conclusion that, the complaints of the patient could be due to sensory multiplex mononeuritis, but at the present the nerve conduction study cannot support this hypothesis. After 2-3 weeks a follow up ENG is recommended.

MDT Meeting - NHNN

Patient 1.: JS (1990): 24 years old male patient who has had right ICA aneurysm stenting in 2012, with progressive stenosis since then. Now he presented with left facial numbness which after 2 hours was followed by tingling in the left leg and arm. These symptoms resolved gradually in 24 hours. The case was presented in order to discuss whether hypoperfusion could have been in the background of this event, and to decide what further management is needed. Reviewing the angiogram performed in 2012 after the stenting, it showed normal relations. While the angiogram performed on the 20th of May 2014, showed that the aneurysm is partly recanalized, pseudoaneurysm at the beginning of the stent and stenosis at the beginning of the stent appeared. There was no sign of acute ischemic lesion on the cerebral imaging. As he is on single antiplatelet therapy at the moment, dual antiplatelet therapy was recommended.

Patient 2.: IK (1957): 57 years old male patient was examined because of TIA starting with tingling on the left face, followed by left arm and leg, lasting for about 15 minutes. During this event no headache was present. The patient had never migraine. Cerebral CT suggested DVA in the right parietal region, and also suggested that thrombus may be present in the DVA. On cerebral MR enhancement was observed in that region. The decision was that MR with contrast should be repeated after three months.

Patient 3.: KM (1957): 57 years old female patient with a history of hypertension and recurrent spontaneous intracerebral haemorrhages was presented in order to discuss about the aetiology of the bleedings. Several imaging were reviewed as follows: CT performed on the 12th of November 2013 after developing headache, vomiting, dysarthria, showed left cerebellar bleeding and lacunar infarct in the basal ganglia, as well as less well defined white matter lesion. Angiogram performed on the 26th of November 2013 was normal. On the 7th of January 2014 the patients experienced left sided sensory loss and headache, at this time CT showed right basal ganglia bleeding beside the residual left cerebellar lesion. MR was also preformed (07.01.2014) showed haemorrhagic defect on the right side and multiple cerebellar lesions. The conclusion was that small vessel disease could be the cause, therefore strict blood pressure control was also recommended.

Patient 4.: LW (1927): 87 years old male patient was transferred from North Middlesex because of worsening right sided weakness and dysphasia. Cerebral CT showed left MCA territory infarction. CTA showed on the right side proximal ICA – high end 50-59% stenosis, on the left side no haemodynamically significant stenosis of ICA, but approx. 60% diameter reduction measured. Vascular surgery consultation was recommended.

Patient 5.: IA (1933): 81 years old male patient with multiple previous strokes, was admitted again because of left sided weakness, dysphasia and visual loss. He is anticoagulated, and his symptoms resolved by now. Cerebral CT performed on the 27th of March showed right sided frontal infarction. CTA performed on the 29th of May did not revealed significant stenosis.

Patient 6. RT (1942): 72 years old male patient had abdominal surgery a week ago, and after the operation he could not be wakened. AF was also observed. On the first CT performed on the 22nd of May there was no visual cortex infarction, while the CT performed 3 days later, showed bilateral PCA territory, right MCA territory infarctions. The mechanism could be either hypotension or embolisation. Echocardiography did not showed thrombus in the heart, but AF is present.

Patient 7. LG (1965): 49 years old male patient, who has had left sided CEA seven years ago. Now he was admitted because of left sided monocular visual loss, which repeated three times. Cerebral CT performed on the 22nd of May showed no ischemia, CTA showed mixed (mainly soft) left sided 70% ICA stenosis. MR should be performed to see whether there is new ischemic lesion or not? If there is, stenting is recommended, if there is not, it needs further consideration.

Patient 8.: DE (1930): 83 years old male patient was admitted because of right sided weakness. Cerebral CT showed left basal ganglia bleeding, blood in the ventricles and signs of small vessel disease. This case was presented in order to discuss about the underlying aetiology. CTA did not reveal any vascular abnormality. The decision was that, later cerebral MR should be performed.

Patient 9.: EH (1930): 84 years old female patient initially presented with an ischemic left arm - brachial artery thrombus. Anticoagulation was started. Later she deteriorated. Further examinations revealed posterior fossa bleeding. Reviewing the cerebral CT, the conclusion was that anticoagulation should be postponed.

Patient 10.: MI (1961): 53 years old female patient known with Moyamoya disease, with right hemisphere event previously. Now she was admitted because of right sided hemiparesis. DWI MRI showed acute infarct in the left hemisphere. Two angiograms were compared (recent one performed on the 19th of March 2014 to that performed on the 7th of January 2013), and progression was revealed.

30.05.2014: Updating the work diary. Finalising scholarship documents.

Date: 31st of May 2014



Dr. Katalin Réka Czuriga-Kovács

Fellow



Professor Martin M Brown

Mentor