

Visiting program: The ESO Department to Department Visit Programme
Host institution: National Hospital for Neurology and Neurosurgery, Queen Square University College Hospitals NHS Foundation Trust
Host supervisor: David Werring, Professor of Clinical Neurology, UCL Institute of Neurology, Honorary Consultant Neurologist National Hospital for Neurology and Neurosurgery, Queen Square University College Hospitals NHS Foundation Trust, Head of Research Department, Brain Repair and Rehabilitation UCL Institute of Neurology
Terms of visit: 16 JAN 2023 - 27 JAN 2023

I would like to thank the European Stroke Organization for granting this visit. During 2 weeks spent in the National Institute of Neurology and Neurosurgery, London, I had the great opportunity to work with an amazing team.

My entire appreciation goes to Professor David Werring, who organized the warm welcome and made me feel like a valued member of his team.

Doctor Werring is a professor of clinical neurology and honorary consultant neurologist at the Stroke Research Centre, UCL Institute of Neurology, Queen Square, and the National Hospital for Neurology and Neurosurgery (NHNN), University College Hospitals (UCH) NHS Foundation Trust. He contributes to delivering hyperacute and acute stroke care, and runs a specialist clinical service and research program in intracerebral haemorrhage and cerebral small vessel disease. His projects include randomised controlled clinical trials and observational (clinical and neuroimaging) studies of cardioembolic stroke, cerebral microbleeds, intracerebral haemorrhage, subarachnoid haemorrhage, and cerebral amyloid angiopathy. He is Chief Investigator of the BHF-funded OPTIMAS (OPTimal TIMing of Anticoagulation after Stroke) trial investigating early oral anticoagulation in ischaemic stroke associated with atrial fibrillation; and of the Stroke Association-funded PROHIBIT-ICH (PREvention Of Hypertensive Injury to the Brain by Intensive Treatment in IntraCerebral Haemorrhage). He is head of the research department of Brain Repair and Rehabilitation at the UCL Queen Square Institute of Neurology. He is a chair of the Association of British Neurologists Stroke Advisory Group, Stroke Specialty Lead for the NIHR North Thames Clinical Research Network, member of the board of directors of the European Stroke Organisation, recent member of the National Institute for Health and Care Excellence (NICE) Stroke Guideline Committee, and member of the Editorial Boards of the *European Journal of Stroke* and *Practical Neurology*. He is a Chair-Elect of the UK Stroke Forum, the largest multidisciplinary stroke conference in the UK. I still can not believe, that such a famous and honorable person has been my teacher for these weeks!

I met Professor David Werring on his outpatient clinics at the UCLH, where I had a unique chance of observing how the leading stroke specialist runs his clinic. I saw many of the most complicated and rare neurological cases there.

One of the two weeks was entirely devoted to the on-call shifts with the professor, that helped me to fully immerse myself in the work of the stroke unit.

The hyper acute stroke unit (HASU) at the National Institute of Neurology and Neurosurgery is one of eight in London and one of the best stroke units in the world due to both the professionalism of all the team members and the employment of the best techniques of investigation provides the thorough investigation, treatment and care immediately following a stroke.

I would love to start with numbers, as the more patients you see daily, the more experienced doctor you become. Hyper acute stroke units (HASU) and acute stroke units (ASU) account for about 50 stroke patients daily! Enormous field to boost the knowledge.

Every morning begins with a discussion of patients and their diagnostic work-up. Next, the patients are examined in the ward round. I was lucky to see how the HASU and ASU work every day and my special interest was in the route of a patient before the admission.

The unique phenomenon of the prehospital management of patients is video triage of patients. Video assessment is integrated into the prehospital setting with an ambulance. Stroke specialist, sitting in front of a computer in NHNN, talks to the stroke suspicion patient, previously assessed by the ambulance doctor, and checks for the signs of stroke. Thus, the team increases the possibility of bringing patients with stroke to the HASU in the therapeutic window.

The patient is admitted through the ambulance line and brought to the HASU, where young doctors conduct an initial neurological examination and then send the patient to neuroimaging. While the initial examination is being carried out, nurses take a predetermined list of blood tests for examinations. After neuroimaging, the team under the supervision of the consultant decides the further plan for the patient: intravenous thrombolysis, if the patient is eligible, is started as soon as CT is done, «bridging» therapy for the patients with large vessel occlusion. Patients outside the therapeutic window start their secondary prevention at HASU as well. Being thoroughly worked out and stabilized at HASU, the patient may be transferred to ASU of NHNN, repatriated to the local hospital or discharged in case of exclusion of an acute condition. In the stroke department, from the very first days, active rehabilitation is carried out by a multidisciplinary team: therapists, speech therapists, psychologists if needed. Multidisciplinary team (MDT) gets together twice daily to plan further pathway of each patient, pay attention at specific needs of each patient, adjust the treatment, plan a discharge. Consultant neurologists together with young doctors apply the most recent research data and their broad clinical experience to make a plan of rehabilitation and personalized (case by case) stroke prevention to every patient, providing an excellent service at the same time.

I really liked this working path, and even during the visit, I began to introduce this to the stroke team of my hospital in Kyiv.

I had an opportunity to join one of the leading specialists, consultant neurologist Dr. Chandratheva during his TIA clinics. I was informed, that patients are usually referred to the clinic after being discharged from the HASU (without confirmed stroke diagnosis), from oncologists or ophthalmologists. I learned many useful diagnostic tools and investigation pathways in this field. What is even more interesting - I saw patients with rare neurological conditions, that seem to be very similar to stroke or TIA.

Another event, I was awarded to attend, was Gower's round - complicated quiz for neurologists in diagnostic and management approach to the most rare and not straightforward neurological cases.

One of the days I spent in the lecture theater with doctors in training, masters and PhD degree students, listening to the lectures of honorary consultants of UCL. There I had an opportunity to learn the system of stroke assistance within London.

Professor Werring gave me an opportunity to visit UCL Stroke research center, described their current projects and introduced me to the team of researchers, each of them spent some time with me, describing their impact to the research in the center as well as topics of their current research.

Whole team here in London is well intended, so they had a few questions about organization back in my country, and a lot of suggestions, how can we improve our stroke care. It was a big scope of information and ideas.

My two-weeks visit culminated with a perfectly organized lunch with a team of Stroke research center. We had a friendly conversations there as if we all had been working with each other for ages.

I would like to express my gratitude to my supervisor, Professor David Werring, for amazing organization, detailed explanation, the huge contribution to my development as a doctor and as a scientist.

Professor Werring helped me to get an understanding of the essential clinical approaches, differential diagnosis and the treatment modalities. His expert opinion and guidance helped me to learn many diagnostic and differential diagnostic pearls.

The visit was an exceptional experience in the leading world hospital for neurology and stroke in particular. This way I step up my knowledge, got unique experience to make further improvement back at home. This is my plan.