European Stroke Organisation (ESO) Department to Department Program 2021

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Thanks to my neurology internship program in Belgium I was able to work as a neurology intern in the Neurovascular stroke unit in the Lille University Hospital in France for one year. It is challenging to resume a year of work but I will try my best to.

Even though France and Belgium are neighboring countries and share a common language, stroke care differ in many aspects.

In terms of size, the Lille University Hospital in France is the only center to this date which performs mechanical thrombectomy in the north of France. Many patients from all over the north are brought to our stroke unit so you can imagine the patient turnover rate. With 22 beds in the conventional unit and 14 beds in the acute stroke care unit it exceeds any hospital in my faculty's network in Belgium.

Stroke specialized neurologists work alongside interventional neuroradiologists, neurosurgeons and vascular surgeons to provide the best medical care possible. In Lille, MRI-scan is available 24/7 and it is the first-choice imaging modality for any neurology motive in the emergency ward. In Belgium, CT scan is widely used and it happens that primary care hospitals don't have MRI-scan available or it's difficult of access. MRI-scan facilitates the diagnosis and is more informative when dealing with difficult decision making in acute stroke situations but it requires expertise to know how to use and interpret it.

Lille University Hospital participates in many clinical studies and taking care of patients which are included is extremely formative as it puts the scientific knowledge you read in the literature into practice. To give you an idea, the stroke unit in Lille University Hospital participates in the MOSTE, LASTE, ACTISAVE, CHARM, COPITCH trials, just to name the most common trials I was confronted with in daily practice. I also had the chance to analyze retrospectively the clinical outcome at 3-months in patients who underwent angioplasty and stenting of the extracranial internal carotid artery in large vessel occlusion strokes in Lille's University Hospital database. This work taught me how to analyze data and modulate it according to key clinical questions and how scientific articles are written.

This is how a regular week is organized in the stroke unit department:

Work starts at 8h30 and finishes at 18h30. First you go and see the nurses responsible for your patients and gather the information needed, solve the urgent problems, then you check all the monitors, ask for the complementary exams and then start examining the new patients. Each day the round is done with the stroke neurologist and occasionally with the Professor or with a more experienced stroke neurologist. Most patients hospitalized had a recanalization treatment (thrombolysis and/or mechanical thrombectomy) and stay in our department for at least 48-72h before being sent to the primary care hospital. Patients who come from the city of Lille who are candidates for rehabilitation stay in the conventional unit and most of the time our job is to deal with the medical complications after stroke. Rehabilitation also starts in the conventional unit as we have a team of physiotherapists and

speech-language pathologists. The lunch break is highly respected, and colleagues try to eat together. The afternoon is mostly devoted to paperwork, but our great team of secretaries help us with our hospital letters by writing what we record. 24-hour neurology shifts are shared among 20 neurology interns and are always accompanied by a neurologist. Weekly neurovascular staffs are done with the presence of vascular surgeons, interventional neuroradiologists and neurosurgeons to mostly discuss patients with significant carotid artery stenosis in stroke, aneurysms, and more complex cases of suspected cerebral vasculitis. Interns participate in weekly symposiums and discuss difficult cases by also expressing what they learned from them. Friday is the day where we have a 2-hour course in the afternoon done by a neurologist of the hospital about a specific neurology subject going from the physiopathology of multiple sclerosis to cardioembolic stroke.

One part of our amazing nurse staff with me and my co-intern in front of the neurovascular unit on the last Saturday morning shift.

Most of the patients hospitalized had classical strokes due to atrial fibrillation or atherosclerosis but this year I was also confronted with difficult clinical decisions and just to site a few : hematoma draining of a hemorrhagic transformation in an acute ischemic stroke in a 35 year-old patient, concomitant ischemic stroke and myocardial infarction with a left ventricular thrombus in a 40 year-old patient, hemorrhagic transformation of an ischemic stroke associated with bilateral pulmonary embolism and the placement of an inferior vena cava filter, intracranial stenosis with a hemodynamic stroke mechanism and a multidisciplinary decision to place an intracranial stent and intracranial dissection with associated stroke in a 20-year old patient who underwent decompressive hemicraniectomy.

During this year I also had the opportunity to work for one week in the post-emergency ward unit which was open because of the covid-19 burden during the winter months. It was a challenge but the diversity of patients' illnesses, the variety of nurses coming from different departments and backgrounds and the supervision of neurologists who had a more global approach made me learn so much and improve a lot in my clinical skills. Participating in the rotation of the general emergency ward shifts also made me develop my clinical skills in other domains and confront with respiratory, cardiovascular, digestive, renal, psychiatric and many more motives. What I learned was that a patient cannot be resumed to one organ dysfunction and it's important especially in training to keep dealing with other motives outside neurology.

In one year, I was able to take care of a wide variety of patients by working in the emergency department, the stroke and the conventional unit. It was challenging as it was a different country with a unique health system and organization. It was very different from my precedent training years but all the people I met and worked with this year made me grow and contributed to my neurology clinical growth.

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