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Reflective Practice

Taking pause: Drawing from the history of neurology during COVID-19

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ABSTRACT

This narrative account uses a moment of patient care to connect multiple influences on my training as a resident during the COVID-19 pandemic. Seemingly unrelated, my newly found interest in the history of neurology, my patient, and the new dynamics of hospital care have made me become a better physician through this reflective piece.

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My recent trip to Barcelona, Spain was highlighted by a surprise visit to the Hospital de la Santa Creu i Sant Pau. My partner's parents, Canadian expats, frequently recommend touring the historic site to visiting guests but their extra nudge to me hinted at my underplayed love for medicine and the difficulty that I had keeping my mind away from neurology while on vacation. They were spot on – no surprise they had a successful career in psychiatry. The architecture, inspired by Catalonian modernism, slowed my steps so my eyes could catch up with the beautiful detail in each corner while occasionally forcing me to take a step back to appreciate the symmetry. The revolutionary hospital design, using separate pavilion buildings to divide wards while maintaining perfect symmetry, appeased my inner neurologist.

My return home mandated a precautionary quarantine. Inspired by my journey, I decided to read more about the history of neurology. A perfect time to escape from COVID-19 projection models, loosely held timelines about vaccine development and clinical trials, and endless email chains on hospital policy change; not to mention the anxiety-provoking nearly worldwide personal protective equipment (PPE) shortage. As a neuromuscular enthusiast, I was drawn to texts that referenced developments in muscle and nerve. Who knew Thomas Willis was the first to describe myasthenia gravis in the 17th century in his *London Practice of Physick* [1]. The remarkable capacity for close, careful observation by our neurology forefathers carried over to eloquent experimental designs in the 18th century. Robert Whytt, former President of the Institutes of Medicine at Edinburgh, established the nature of the reflex arc in his experiment on decapitated frogs:

"it ought to be observed, that when, after decollation, the spinal marrow of a frog is destroyed with red hot wire, no visible motion is produced in its limbs or body, by pricking, cutting, or otherwise hurting them . . . it seems also to deserve notice, that, after the destruction of the spinal marrow . . . there is no sympathy between the different muscles or other parts of the body as observed when the spinal marrow was entire . . . " [2].

Time slowed again as I purposefully moved through this new historical journey with awe and reflection. The daily COVID-19 update from multiple email threads could wait. Not for too long. One of those emails buried amongst the others informed me of my redeployment to the inpatient general neurology service post quarantine. My newly embarked journey was put on pause.

We sat in the team room awaiting handover – 6 feet apart – with a sort of inner uneasiness while trying to project adaptability to the unfamiliar and tense hospital environment. The post-call resident handed over a new consult in the Emergency Department; "A 28-year-old with fall concerning for progressive weakness". The senior resident quickly darted to the EMR to check the patient's location. With hesitation, she announced "He's in the hot zone", referring to the area in which all COVID-19 probable patients were being triaged or treated. Each team member's uneasiness now became palpable throughout the room. I decided to take the consult, hoping that would settle the nerves in the room while allowing myself to become consumed in thought about my new patient's nerves. After all, what good was my newly found appreciation for the curiosity and diligence of historical neurologists if I wasn't willing to take a similar dive during challenging times.

Dr. X was a 28-year-old veterinarian with a three-day history of progressive weakness. The history and exam were highly suggestive of Guillain-Barré syndrome. I began challenging myself on features that may not be consistent with the provisional diagnosis as I doffed my PPE. No doubt, the quick progression was a bit concerning but was he being a bit dismissive of mild symptoms or was this another 'there is no classical presentation of GBS' – a nod

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to one of the pearls bestowed on me by a neuromuscular staff and mentor. We expeditiously performed his lumbar puncture amidst the transformed emergency department. I felt pleased with the flow of management as he received his first dose of intravenous immunoglobulin that evening. His low score on the International Guillain-Barré Syndrome Outcome prognosis score for risk of respiratory failure in the first week of admission helped me lean back into my chair while reading around his case.

The following day, I entered Dr. X's room feeling a bit more adjusted to the pandemic's effect on the hospital workflow. I glanced at him at the foot of his bed midway through looking at his overnight vitals and quickly looked back up to observe for longer. His expressionless face struck me, prompting me to engage him in conversation to indirectly assess his facial movements. I became disheartened once it was clear that he had developed facial diplegia. I put my disheartened feelings aside, reminding myself I was in the familiar zone of treating a medical professional that mirrored me in many ways while refraining from the defense mechanism of strict intellectualization. I left his bedside feeling content about the way I handled our interaction then switched gears to thinking about changes in his management – a flip that I am constantly exercising throughout the day on the wards.

The nurse practitioner calmly alerted me of Dr. X's new chest pain mid-afternoon the following day. I walked to his room making a return dive to the possibilities. My neuromuscular assessment for respiratory weakness revealed he was considerably worse and likely suffering from fatigue of his respiratory muscles and inability to clear his secretions. The drop in the repeat forced vital capacity was unsurprising and frustrating. I stood by his bedside as the intensive care unit was preparing for his intubation downstairs – another new logistical change in the era of COVID-19. Dr. X became flush and diaphoretic as his impending intubation and the unknown that lay ahead was causing him panic. I remained with him carefully tiptoeing within the previously embarked boundary of intellectualization and my transference to his plight. This friction in the boundaries of the physician patient relationship slowly dissipated as I realized there was little more important than my time with Dr. X at bedside. While I understood I could not change the course of his disease, sharing this vulnerability with him in this unfamiliar environment provided some comfort to us both.

I walked away from his room once the intensive care unit outreach team had eventually transferred him. Time slowed again as I stared into space while looking down at the ward floors with a disapproving sulk thinking back to the low percentage of respiratory failure that I calculated a few nights ago. It's interesting how much weight one can put into a number. I managed to switch gears again after hearing my pager go off.

I often think back to Dr. X when I allow myself to slow down. I find that revisiting my moments with him at bedside has surprisingly connected my newly found interest in the history of neurology and our ever-changing society today. It is not hard to imagine the call for compassionate care when preparing Dr. X for his transfer to the intensive care unit. We encounter many of these moments throughout any typical day as health care providers. The COVID-19 pandemic has changed our reality by adding pressure to make efficient assessments in order to minimize potential exposure. Our patients are often faced with a greater burden of uncertainty from newly diagnosed illnesses amidst a pandemic with less emotional support due to visitor restrictions. Newly designed technological solutions that allow for remote patient assessments are creative strategies amidst this pandemic but are not universal and have unclear effects on the therapeutic relationship. The ability to be present with patients was an understated aspect of many historical figures in the field of neurology. Although the ethos of bedside presence dates back to Hippocrates [3] and is a perpetual component of medical education for many – our merit as physicians is not lessened when our patients remind us of these basic lessons. After all, it was Charcot who, during his *Leçons de mardi,* reminded us of our human requirement for repetition in learning new and old lessons:

"Why do we have to go over the same set of symptoms twenty times before we understand it? Why does the first statement of what seems a new fact always leave us cold? Because our minds have to take in something that deranges our original set of ideas, but we are all of us like that in this miserable world" [3].

Dr. X was discharged from our care and went on to have a steady recovery during a one-month inpatient rehabilitation. The time I spent with him provides a reminder of how important our connections are with one another both within and outside of the hospital. How distressing it must be for a patient to begin the journey of new neurological disease alone in the throes of a healthcare system that is consumed by the chaos of a pandemic. I may enter their rooms with face masks and PPE that threaten anonymity, but I stay by the bedside so that the familiarity of my voice and touch shows them that their journey is not alone. While I do this, time slows down for us both, which is exactly what my neurology forefathers would have prescribed.

Disclosures

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