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Editorial

To Stay at Port or to Go to Sea: Are Clinical Clerkships a Double-Edged Sword During the COVID-19 Pandemic? Where Do We Go From Here?

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The ongoing pandemic has changed the way medicine is taught and learned. The unexpected challenges of the spread of SARS-CoV-2 worldwide have forced our educators to rethink in a rather narrow window of time the organization of medical education all around the globe. In many countries, clinical clerkships have been cancelled and medical students' access to university hospitals has been restricted. Lectures have been replaced by online courses and, in many instances, case presentations have replaced classical rotations in the hospital. Although it is not difficult to understand why these measures were put into practice, one is still left wondering: are clinical clerkships dispensable in the training of a future physician? Also, to what extent has the SARS-CoV-2 pandemic affected the work of residents and young researchers? In the current and previous issue of the *International Journal of Medical Students*, many of these topics are tackled in the *Experience* articles that we decided to publish with perspectives from countries including Italy,[1,2] China/Zimbawe,[3] Spain,[4] the United States,[5-10] Mexico,[11,12] India,[13-18] Pakistan,[19] Vietnam,[20] Saudi Arabia,[21] Canada,[22,23] Thailand,[24] Ecuador,[25] Nigeria,[26] Democratic Republic of Congo,[27,28] Ireland,[29,30] the United Kingdom,[31,32] South Africa,[33] Jamaica,[34] and Greece.[35,36]

Sir William Osler's quote *"he who studies medicine without books sails an uncharted sea, but he who studies medicine without patients does not go to sea at all"* is the *theme* of the latest issues of the *International Journal of Medical Students*. As a rhetorical question has arisen in the minds of all students in medicine worldwide: can we actually learn medicine without direct interaction with real patients? When we were younger and progressing through medical school, we sometimes had the delusion that digesting as much medical information as possible could be comparable to the knowledge which we accumulated during our hospital rotations. We were both right and wrong simultaneously. In certain instances, our individual reading enabled us to better grasp a subject and perhaps to establish a correct diagnosis when faced with a patient. However, much of medicine remains an apprenticeship and the day-to-day practicalities of clinical work cannot be effectively taught or learned through the same modalities. The transition from medical student to resident physician is a rather complicated task. One quickly discovers that taking care of a patient does not only require you to establish a correct diagnosis and an appropriate treatment plan, but also that it involves a great deal of time-consuming paperwork: completing medical charts, spending hours in front of the computer or on the phone to request blood tests, scheduling the patient for imaging or verifying whether the medication you prescribed is available in the hospital pharmacy. With the restriction or cessation of clinical rotations, the outgoing classes of 2021 may feel short-changed on the in-between learning from which their predecessors unwittingly benefited.

Just a couple of days ago one of the Editors was asked by a colleague in the internal medicine ward to visit a patient with influenza pneumonia (unsurprisingly, flu-like symptoms in the summer can actually reflect a diagnosis of influenza and not necessarily COVID-19). The patient also has new thrombocytopenia and no signs of bleeding. What was the origin of the hematological finding? Could it be secondary to the viral infection? Could it be immune thrombocytopenia? Or does this sudden decrease of the platelet count hide a more severe diagnosis, i.e. cancer?[37-42] It is clear that the actual presentations of patients we see every day are far from the "textbook cases" we were versed on during our undergraduate training. Although the cancellation of clinical clerkships was decided in order to prevent the spread of SARS-CoV-2, as well as to reduce the unnecessary use of limited personal protective equipment, we wonder how our future colleagues will adapt to these changes and what will be the sequelae of these decisions. Medical educators are currently struggling between their duty to protect their students from unnecessary harms and their duty to educate the clinicians of tomorrow; to stay at port or to go to sea.

Medical academics will require rapid innovative thinking and continued determination to identify potential solutions to address unavoidable training deficiencies which are likely to arise as a result of these difficult times, since the lack of clinical clerkships will impact the education of medical students in a range of foreseeable and unforeseeable manners. In line with this, we believe that it has never been so important to provide a platform to present the unexpected ways in which the lives and training of medical students, residents, senior physicians, members of academia and researchers worldwide have all been affected by the SARS-CoV-2 pandemic.[43]

In this issue, we are sharing not only the experiences of colleagues from all over the world, but the results of a survey to identify perceptions of how the current lockdowns have affected students' learning process,[44] important reviews on COVID-19,[45] including the potential effects of probiotics in the disease,[46] and a case report of a patient with gastrointestinal symptoms as the main manifestation.[47] This last article kept us wondering about a public health problem that is yet to come if it is proven that the virus can spread in stools, especially for those regions of the world highly affected by disparities and low- and middle-income countries.[48] As always, we are also publishing about general medicine topics. You will find original articles about the effects of schoolbags weigh in children,[49] prognostic factors for mortality of rocky mountain spotted fever,[50] the association of acute liver failure with heat stroke,[51] gene variants in major depressive disorder in patients with childhood trauma,[52] novel biomarkers in Alzheimer's disease,[53] and the description of artifacts in electrocardiograms due to neurostimulators.[54]

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Our missions of spreading science does not end with the publication of an issue.[43] Systemic racism continues to prevail in the face of the blinding spotlights which have been drawn upon it in the recent months. In an *Experience* article in this issue, Pak and colleagues explore the origins of SARS-CoV-2 and draw conclusions of the detrimental consequences intended by the use of xenophobic terms,[9] which are banned from the *International Journal of Medical Students*.

In these difficult times where science has been put on test by the general public and especially politicians, we close this *Editorial* with a call for decisions makers to listen to science. No vaccines should be administered without the proper research.[55] We cannot go back before the Nuremberg Code (1947). Even governors and people in power should follow ethical principles when dealing with human lives.

The *Journal* remains a global forum for medical trainees of all nations. As such, we will continue to play a central role in promoting accurate and respectful scientific dialogue, in an effort to combat misinformation and xenophobic rhetoric.

References

1. Biavardi NG. Being an Italian Medical Student During the COVID-19 Outbreak. Int J Med Students. 2020 Jan-Apr;8(1):49-50.
2. Pagano G, Luglio G. Medical Education in Naples, Italy, at the Time of SARS-CoV-2. Int J Med Students. 2020 Jan-Apr;8(1):51-53.
3. Gona CV. Online Final Medical School Exam in a Low-Income Country During COVID-19 Pandemic. Int J Med Students. 2020 May-Aug;8(2):203-4.
4. López-Ruiz E. Studying Medicine in Barcelona During the COVID-19 Pandemic. Int J Med Students. 2020 Jan-Apr;8(1):60-61.
5. Boudreaux JF. Adapting to COVID-19: New Orleans Medical Students Respond. Int J Med Students. 2020;8(2):197-9.
6. Liu BD. Being an American 2nd Year Medical Student in the COVID-19 Pandemic. Int J Med Students. 2020 Jan-Apr;8(1):77-78.
7. Nulkar A. Lessons from COVID-19: The Perspective of an International Medical Student Back in the United States. Int J Med Students. 2020 Jan-Apr;8(1):75-76.
8. O'Connor-Terry C, Gowda T, Zuchelkowski B, Minney S, Kwon J. Medical Students Have a Powerful Role in Addressing Community Needs in the COVID-19 Pandemic: An Experience from the US. Int J Med Students. 2020 Jan-Apr;8(1):70-72.
9. Pak TK, Sandouk A, Le P. Fighting COVID-19: What's in a Name?. Int J Med Students. 2020;8(2):200-2.
10. Qarajeh R, Tahboub F, Rafie N, Pirani N, Jackson MA, Cochran CD. The Effect of COVID-19 Pandemic on US Medical Students in their Clinical Years. Int J Med Students. 2020 May-Aug;8(2):172-4.
11. Pacheco Carrillo AM. The Utility of Online Resources in Times of COVID-19: A Mexican Medical Student Point of View. Int J Med Students. 2020 Jan-Apr;8(1):58-59.
12. Medina-Gaona MF. Clinical Skills Abilities Development During COVID-19 Pandemic in Mexico City. Int J Med Students. 2020 May-Aug;8(2):175-6.
13. Chatterjee S. The COVID-19 Pandemic Through the Lens of a Medical Student in India. Int J Med Students. 2020 Jan-Apr;8(1):82-83.
14. Chaudary M, Sasmal PK. A Surgical Resident's Perspective about COVID-19 Pandemic: Unique Experience and Lessons Learnt. Int J Med Students. 2020 May-Aug;8(2): 156-8.
15. Chetana Shanmukhappa S. Stuck in Limbo: Coping with an Unusual Circumstance as an International Medical Graduate from India. Int J Med Students. 2020 May-Aug;8(2):159-61.
16. Kalra T, Kalra N. COVID-19: Where Do We Go from Here? An Experience from Medical Students in India. Int J Med Students. 2020 Jan-Apr;8(1):66-67.
17. Kapri P, Gadgile P. The Voice of a Psychiatry Resident Doctor During COVID-19 Outbreak in Mumbai, India. Int J Med Students. 2020 Jan-Apr;8(1):73-74.
18. Kar CD, Mohapatra D. The Outbreak of the Century: A Chronicle Experience by a Medical Intern. Int J Med Students. 2020;8(2):194-6.
19. Siraj A, Khan MW. Uncertainty in the Air. In the Emergency Room with COVID-19 in Pakistan. Int J Med Students. 2020 Jan-Apr;8(1):54-55.
20. Nguyen Tran Minh D, Pham Huy T, Nguyen Hoang D, Quach Thieu M. COVID-19: Experience from Vietnam Medical Students. Int J Med Students. 2020 Jan-Apr;8(1):62-63.
21. Zitoun OA. COVID-19 Pandemic: Other Perspective. Saudi Arabia. Int J Med Students. 2020 Jan-Apr;8(1):64-65.
22. Leong J, Sarohia GS. A New Reality: Experiences from Canadian Clerkship Medical Students during COVID-19. Int J Med Students. 2020 Jan-Apr;8(1):68-69.
23. Patel J. To Help or Not to Help: A First Year Canadian Medical Student's Dilemma During the COVID-19 Pandemic. Int J Med Students. 2020 May-Aug;8(2):169-71.
24. Samuthpongtorn C, Pongpirul K. Medical Students in Low- and Middle-Income Countries and COVID-19 Pandemic. Int J Med Students. 2020 Jan-Apr;8(1):79-81.
25. Nicolalde B. The Role of Telemedicine on Ecuador During the COVID-19 Crisis: A Perspective from a Volunteer Physician. Int J Med Students. 2020 May-Aug;8(2):154-5.
26. Adebisi YA, Agboola P, Okereke M. COVID-19 Pandemic: Medical and Pharmacy Education in Nigeria. Int J Med Students. 2020;8(2):162-4.
27. Djoutsop Mbougo O, Youmbi Nono V, Kanmounye US. COVID-19 and Clinical Rotations in the Democratic Republic of Congo. Int J Med Students. 2020 May-Aug;8(2):177-9.
28. Youmbi NV. A Positive Attitude to Negate a False Positive Test Result: An Intern's Experience with COVID-19. Int J Med Students. 2020;8(2):165-6.
29. Ali R. Balancing Our Identities as Medical Students and Global Citizens in the Wake of COVID-19. Int J Med Students. 2020 May-Aug;8(2):167-8.
30. Komer L. COVID-19 amongst the Pandemic of Medical Student Mental Health. Int J Med Students. 2020 Jan-Apr;8(1):56-57.
31. Holt L. NHS Nightingale North West: A Medical Student on the Front Lines. Int J Med Students. 2020 May-Aug;8(2):180-2.
32. Suseanu A-I. Experiences of a London Medical Student in the COVID-19 Pandemic. Int J Med Students. 2020;8(2):183-5.
33. Maharaj S. South Africa and COVID-19: A Medical Student Perspective. Int J Med Students. 2020;8(2):186-7.
34. Thomas N. Utilizing Health Education and Promotion to Minimize the Impact of COVID-19. Int J Med Students. 2020 May-Aug;8(1):188-90.
35. Vlachopoulos N, Smyrnakis E, Stachteas P, Exindari M, Gioula G, Papa A. Medical Students during COVID-19 Pandemic: Lessons Learned from Response Teams in Greece. Int J Med Students. 2020;8(2):191-3.
36. Potolidis D. Medical Volunteerism in Times of COVID-19: Burden or Relief?. Int J Med Students. 2020 May-Aug;8(2):152-3.
37. Găman AM, Găman MA. Immune Thrombocytopenia in Chronic Lymphocytic Leukemia. J Blood Disorders Transf. 2014;5(198):2.
38. Găman AM, Găman MA. The antioxidant treatment in patients with immune thrombocytopenia. Haematologica. 2014;99:773-774.
39. Găman MA, Găman AM. Pathophysiology, Diagnosis and Treatment of Immune Thrombocytopenia. Int J Med Students. 2017 Jan-Apr;5(1):32-36.
40. Găman MA, Găman AM. The evaluation of reactive oxygen species in chronic idiopathic thrombocytopenic purpura and Helicobacter pylori infection versus chronic ITP without Helicobacter pylori infection. Haematologica. 2017;102:835-835.
41. Jansen AJG, Low HZ, van den Brand J, van Riel D, Osterhaus A, van der Vries E. Platelets can phagocytose influenza virus which may contribute to the occurrence of thrombocytopenia during influenza infection. Blood. 2016;128(22):1358.
42. Kara-Jovanović A, Suvajdžić-Vuković N. Clinical Presentation and Therapy of Primary Immune Thrombocytopenia Resistant to Splenectomy. Int J Med Students. 2020 Jan-Apr;8(1):11-14.
43. Bonilla-Escobar FJ. Leadership and Health: The Scientific Journal's Mission of Spreading Science in Times of Pandemic. Int J Med Students. 2020 Jan-Apr;8(1):9-10.
44. Thomas A, Shenoy MT, Shenoy KT, Suresh Kumar S, Sidheeque A, Khovidh C, et al. Survey Among Medical Students During COVID-19 Lockdown: The Online Class Dilemma. Int J Med Students. 2020 May-Aug;8(2):102-6.
45. Anwar H, Khan QU. Pathology and Therapeutics of COVID-19: A Review. Int J Med Students. 2020 May-Aug;8(2):113-20.
46. Adnan ML, Pramaningtyas MD. Probiotics as Promising Immunomodulatory Agents to Prevent COVID-19 Infection: A Narrative Review. Int J Med Students. 2020 May-Aug;8(2):121-5.
47. Agarwal S, Mistry H. Clinical Course of a Covid-19 Patient with Gastrointestinal Symptoms- A Case Report. Int J Med Students. 2020 May-Aug;8(2):148-51.
48. Arslan M, Xu B, Gamal El-Din M. Transmission of SARS-CoV-2 via fecal-oral and aerosols-borne routes: Environmental dynamics and implications for wastewater management in underprivileged societies. Sci Total Environ. 2020 Jul 3;743:140709.

49. Guessogo WR, Assomo-Ndemba PB, Ebal-Minye E, Mekoulou-Ndongo J, Bika-Lélé CB, Mbang-Bian W, et al. Effect of Schoolbag Weight on Musculoskeletal Pain among Primary School Children in Yaounde, Cameroon: A Cross-sectional Study. Int J Med Students. 2020 May-Aug;8(2):96-101.

50. Jaramillo-Ramírez HH, Hernández-Ríos JJ, Martínez-González FM, Gutiérrez-Bañales LA, García-Valenzuela ER, Beltrán-López JA, et al. Prognostic Factors in Patients with Rocky Mountain Spotted Fever. Int J Med Students. 2020 May-Aug;8(2):107-10.

51. Jaramillo-Ramírez H, Hernández-Ríos J, Martínez-González FM, Beltrán A, Gutiérrez A. Acute Liver Failure in Patients with Classic Heat Stroke. Int J Med Students. 2020 May-Aug;8(2):111-3.

52. Wietfeldt N, Boileau A. FKBP5 Gene Variants as Predictors for Antidepressant Response in Individuals with Major Depressive Disorder Who Have Experienced Childhood Trauma. A Systematic Review. Int J Med Students. 2020;8(2):126-34.

53. Rao SJ, Boileau AJ. Novel Blood Biomarkers for an Earlier Diagnosis of Alzheimer's Disease: A Literature Review. Int J Med Students. 2020 May-Aug;8(2):135-44.

54. Gupta S, Shaw C, Haseeb S, Baranchuck A. ECG Artifact by a Spinal Cord Neurostimulator: A Case Report. Int J Med Students. 2020 May-Aug;8(1):145-7.

55. Cohen J. Here's how the U.S. could release a COVID-19 vaccine before the election—and why that scares some. American Association for the Advancement of Science (AAA). https://www.sciencemag.org/news/2020/08/here-s-how-us-could-release-covid-19-vaccine-election-and-why-scares-some#. Published 2020. Updated Aug 28, 2020. Accessed Aug 28, 2020.

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