

*Brief Communication*

# HUMAN ANATOMICAL DISSECTION TAKES A COMPULSORY BREAK DURING COVID-19 PANDEMIC

## La disección en Anatomía Humana toma un descanso obligatorio durante la pandemia de Covid-19

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### ABSTRACT

The outbreak of the coronavirus effects on people's daily lives. Like nothing most people have experienced before, one of the many affected sectors is education. In response to Covid-19 pandemic, medical education faculty have quickly transitioned the curriculum to online formats. But no matter the quality of the online resource, do not provide the same level of understanding of complex anatomical relationships as studying human bodies. Under restriction of social isolation because of Covid-19 pandemic, human anatomical dissection takes a compulsory break. Afterward students will come back to their essential training in dissection room.

**Keywords:** human anatomical dissection, medical studies during Covid-19 pandemic, generation Z

## 1. Introduction

Pandemics are not a new occurrence. Indeed, they hit humankind worldwide since the early times. Among many were 3 pandemics of bubonic plague, smallpox, cholera, 1918 influenza pandemic, many others and now days the Covid-19's pandemic. These pandemics have ravaged humanity throughout its existence, often changing life's conditions and even their future. The outbreak of the coronavirus began in Wuhan, China, in November 2019 and spread exponentially in our age where increasing urbanization and frequent international travel allow for the uninterrupted transmission of infectious diseases. The World Health Organization named the disease caused by this severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) as Covid-19, and subsequently labeled it a pandemic on 11th March. On 15 August, the number of cases reported worldwide crossed 21 million, with 205 countries and territories affected (WHO 2020).

As worldwide governments struggle to contain the spread of Covid-19, and with over a third of the world's population currently under some form of lockdown. The effects the coronavirus has had

on people's daily lives is clearly like nothing most people have experienced before. One of the many affected sectors is education (UNESCO 2020).

## 2. Human anatomical dissection in Generation Z's times

Today medical students are members of Generation Z, are those born around the early 2000s at the same time as the explosive world-wide spread of mobile devices and social media. Generation Z is the first generation to grow up in a world of widespread access to computers, the internet, mobile devices, smartphones and social media and, as a result, are hyper-connected, confident with technology, and choose self-study using electronic resources in preference to traditional teaching methods (Romero-Reveron, 2020). Nevertheless since century XVI human anatomical dissection is employed as a major tool in the teaching and learning of human anatomy, owing to its perceived usefulness for understanding classifications and inter-relationships of different parts of human body, integration of theory and practice of human anatomy, improvement of physicians' manual dexterity and practical skills, tactile perception, humanistic care, three-dimensional perspectives of structures, and the explanation of problems encountered in medicine and surgery and also for improving physicians' expertise in physical examinations, which cannot be carried out correctly without a thorough knowledge of gross and topographical human anatomy. Dissection steps like reflecting layers to see deeper structures, tracing neurovasculature along its pathways, and even removing fascia provide a deeper understanding of anatomical complexity. Actively working to reveal structures while problem-solving with their lab group provides students with a greater depth of anatomical understanding and experience in a team-based approach to medicine (Franchi, 2020). In anatomy lessons, among Generation Z the use of digital technology is now common, in the form of e-books, models, and simulations. Technology should allow for interactive, student-centered learning. In fact, the study of anatomy with cadaver dissection has become unusual in most medical schools due to the lack of the number of corpses compared with the growing number of students. But regardless of the quality of the online resource, do not provide the same level of understanding of compound anatomical relationships as studying human bodies (Gupta, Pandey, 2020). There should be no doubt, anatomical dissection provides the solid foundation upon which all subsequent clinical courses and practice will build. Every disease process and every pathology happen to a piece of human anatomy.

## 3. Medical studies during Covid-19 pandemic

In response to COVID-19 pandemic, universities are taking intensive measures to prevent and protect all students and staff members from the highly infectious disease. Faculty members are already in the process of transitioning to online teaching that include content in the basic sciences, health systems sciences and even in behavioral sciences but not likely with anatomical dissection teaching. Small-group formats convene online in virtual team settings, and clinical skills sessions may occur online or, in some cases, may be deferred. Examinations have also transitioned to online settings. Updating content material may be a benefit of the online format and virtual activities seem functional, but outcomes of these changes will require subsequent evaluation (Rose 2020).

Hence, the use of innovative teaching strategies and techniques becomes needed in this particular period of academic life. Video-based learning, with dissection videos and a richer iconography, team-based learning (even if each student by themselves, at home by using computers), peer teaching, and question-times are some examples (Sahu, 2020).

It is no easy task for students or teacher's adaptation to online distance learning, despite there being a large number of online anatomy software programs available for students to use, they can often be costly. Institutions that can afford to do so should endeavor to give their students access to these during the current situation. However, to account for equality of opportunity between institutions with varying financial freedom (Franchi, 2020; Rose, 2020).

There is also a steep learning curve associated with using these programs for both teachers and students thus further bringing into question their usefulness in times as challenging as a pandemic. In addition, many universities do not have enough infrastructure or resources to facilitate online teaching with immediate effect. What about those do not have access to laptops and internet facilities at home. What will happen to those students whose courses cannot be taught online?. The quality of online education is a critical issue that needs proper attention (Gupta, Pandey, 2020; Sahu, 2020).

Use of education technology at a mass scale for economically deprived countries, limited availability of techno friendly medical educators and adaptation of student to newer teaching techniques was already restrained in pre-pandemic time. Also, the alignment of new teaching format with amount of content and duration of topic coverage, necessary and safe enough to train for effective practice of problem-based learning warrants reorganizing available resources.

During Covid-19 pandemic times all the academic classes are suspended during worldwide lockdown to alleviate the propagation. It is high time to rethink ways to deliver quality medical education under restriction of social isolation and absenteeism in real time teachings and anatomical dissections.

## 4. Discussion

Generation Z's competent physicians, particularly surgeons, need a deep understanding of human anatomy for safe clinical and surgical procedures. To achieve this goal, the essential tool is the anatomical dissection. Human anatomy is complex. No matter the quality of the resource, simulations and online instruction do not provide the same level of understanding of complex anatomical relationships as studying human bodies. The option that more medical schools worldwide will turn to methods of human anatomy teaching that keep out anatomical dissection in the face of the challenges of education in the time of Covid-19 is doubly concerning. The necessity and possibility of anatomical dissection in the time of Covid-19 should be acknowledged by universities and medical schools, and anatomy instructors need to be proactive in advancing plans and proposals for how dissection can proceed safe. "This too shall pass" is a well-known adage originated in Jewish and Persian folklore, that express the impermanence of the both hardship and joy through mankind's history. Indeed, Covid-19 pandemic will pass too. We have to be patient. Keep safe at home and learning human anatomy on line. As many other human activities during Covid-19 pandemic, human anatomical dissection takes a compulsory break. It will be back as soon as it's safe. Afterward students will come back to dissection room to complete this essential training in medical studies.

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## *Notes on contributor*

His research interest is in anatomical education and history of human anatomy.

## 5. Conflict of Interest No conflict of interest was present

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### RESUMEN

El brote de coronavirus ha tenido efectos en la vida diaria de las personas de una forma en que la mayoría de las personas no había experimentado. Uno de los muchos sectores afectados es la educación, a consecuencia de la pandemia, las facultades de medicina han debido adaptar sus planes de estudio a formatos en línea. Independiente de la calidad de los recursos informáticos, éstos no brindan el mismo nivel de comprensión de las relaciones anatómicas complejas que el estudio directo de cuerpos humanos. Bajo la restricción del aislamiento social debido a la pandemia de Covid-19, la disección anatómica humana toma un descanso obligatorio. Posteriormente, los estudiantes volverán a su formación básica en la sala de disección.

**Palabras clave:** disección anatómica humana, estudios médicos durante la pandemia Covid-19, generación Z.

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