### Dear All,

Few updates from the travel clinic front. After a hiatus and realizing how much our lives have changed this year, we wanted to touch base again:

# WHO disease outbreaks news outside COVID-19:

- Yellow fever French Guiana, France
   1 August 2020
- Plague Democratic Republic of the Congo 23 July 2020
- Influenza A(H1N2) variant virus Brazil
   9 July 2020
- Middle East respiratory syndrome coronavirus (MERS-CoV) Saudi Arabia
   2 July 2020
- Ebola virus disease Democratic Republic of the Congo 26 June 2020

# **NEWS and UPDATES:**

- <u>NEJM case report</u> encephalopathy and coma developed in a 13-year-old boy shortly after he
  received a single dose of ivermectin to prevent scabies infection. ABCB1 sequencing
  identified the child as a compound heterozygote for two nonsense mutations.
- <u>Dexamethasone</u> use for COVID19 could trigger <u>Strongyloides</u>
   <u>hyperinfection/dissemination</u> syndrome in people w asymptomatic infection. Consider the dx in patients w acute clinical decompensation, especially if with GNR bacteremia or CNS infection.
- RCT from Brazil, there was no difference in 28-d mortality between patients randomized to methylprednisolone vs placebo (n=393 in mITT analysis).
- amphotericin B is well tolerated in humans.
- Lancet Global Health on indirect impacts of COVID19 pandemic on HIV, TB, and Malaria.
- <u>praziquantel</u> in pregnant or lactating women compared to other recipients & no need to stop breastfeeding for 72h after treatment.
- <u>Botswana</u>, increasing CD4-count threshold for CrAg screening from ≤100 to ≤200 cells/μL tripled numbers screened. CrAg-prevalence was 3.5% at CD4 101-200 & 6.2% ≤100. 6mo mortality was 21.4% in CrAg+ CD4 ≤100 & 3.2% in CrAg+ CD4 101-200 cells/μL.
- leishmaniasis endemicity by WHO, published with 2018 data.
- Chagas Disease in the New York City Metropolitan Area.
- <u>Histoplasmosis</u>: Fighting a neglected killer of patients with advanced HIV disease in Latin America.
- yellow fever in travelers: an update.
- <u>Cryptococcal-related Mortality</u> Despite Fluconazole Preemptive Treatment in a Cryptococcal Antigen Screen-and-Treat Program
- <u>Chagas disease</u> saves money (as well as hearts& colons) compared to no screening, at all levels of maternal prevalence >0.06%.
- Chagas Disease Missouri, 2018
- Sporothrix species.
- mosquitoes on high-altitude winds with implications for Malaria infection.
- <u>leprosy</u> patients continue long after treatment of the infection.
- Oral Cholera Vaccine Recommendations for U.S. Travelers.
- typhoid, one of our most deadly neglected tropical diseases, 135,000 deaths annually.

- <u>toxocariasis</u>. Toxocariasis is emerging as a major parasitic worm infection, and now we think it is widespread among the poor in the USA, causing developmental delays and asthma.
- <u>human African trypanosomiasis</u> including fexinidazole: substantial changes for clinical practice.
- Chagas disease.

### **CLINIC ACTIVITIES:**

- Map of worldwide COVID-19 travel restrictions
- We have continued providing the YF fever vaccine in our clinic with close to ~1300 doses given to date
- We are slowly resuming our pre-travel visits again. Let us know if you have any questions or concerns.

### **RESEARCH:**

It has been a very productive year from our group with more than 20 publications so far!

- We published the <u>protocol</u> and also the <u>outcome</u> of an extensive systematic review and meta-analysis on the natural history of Chagas disease from its acute phase and indeterminate form establishing a clear annual risk of cardiomyopathy among asymptomatic individuals in Endemic regions. We found an annual rate of cardiomyopathy of ~ 5% among patients with acute Chagas infection and 2 % among patients with the indeterminate chronic Chagas disease. These findings promise to enforce the urgency to diagnose and treat early patients living with Chagas Disease. The pre-print reached more than 100 downloads. The final paper was published in <u>JAMA Open Network</u>. CU Anschutz news did a <u>press release</u>. A <u>Reuters Health</u> report is coming up.
- We published a review on clinical characteristics of <u>orally acquired Chagas disease</u> (an underrecognized entity). The paper reviews the most prominent clinical characteristics and management of this condition. This paper has important implications for the management of oral acquired Chagas disease in Latin America.
- In a project led by Gabriel (an IM resident now), we added evidence to the literature of
  increased mortality of <u>Cryptococcal meningitis among HIV negative</u>, <u>non-transplant patients</u>.
  Underlying immune deficiencies and a possible delay in diagnosis could explain those
  findings.
- Greg and Sarah reported novel clinical case presentations through case reports of Cryptococcosis including Cryptococcal retinitis, and pericarditis
- Solana, a medical student, led a project where we found that diabetes mellitus increases the
  mortality risk in cryptococcosis. This work was presented in the department of medicine
  research day and won the outstanding poster presentation award. This work will be also
  presented as a poster in the upcoming ID week.
- In a project led by William, a medical student, we added evidence to the literature on the potential benefit of adjuvant corticosteroids in <a href="Pneumocystis jirovecii">Pneumocystis jirovecii</a> pneumonia among HIV negative patients. This work was also presented in the department of medicine research day and won the outstanding poster presentation award.
- In a project led by Mehdi, a medical student, we published our novel findings on <u>safety and clinical features description of travels receiving the Yellow Fever vaccine in the US</u>. We concluded that identifying the type of travel, itinerary, and underlying medical conditions allows providers to administer the YF vaccine to travelers safely. There is a need to identify strategies to improve the timing of YF vaccination among travelers visiting friends and family.
- Additionally, we published a state of the art review on best practices of <u>prevention of Yellow</u> <u>fever among travelers</u> at Lancet Infectious Diseases.

• Sarah published our experience treating travelers with <u>Miltefosine for Cutaneous</u> Leishmaniasis Due to *Leishmania (Viannia) panamensis*.

Since the beginning of the pandemic in the US, we have remained active in the clinical care of patients with COVID-19 infection as well as developing clinical research and critical opinion pieces about the disease:

- Published a <u>systematic review and meta-analysis</u> of Clinical, laboratory, and imaging features of patients with COVID-19.
- Commentary on the <u>structural vulnerabilities</u> in the US of those affected with COVID-19.
- Commentaries on the disparities and difficulties of testing and management of COVID-19 in vulnerable settings like jails and skilled nursing facilities.
- Letter to editor bringing attention to a potential therapeutic antiviral target <u>blocking tissue</u> serine protease for SARS-CoV-2.
- Review article on the rationale and biology of <u>immunomodulators as a treatment for COVID-</u>
   19.
- Outstanding review by Dr. Sias Scherger: Rethinking <u>interleukin-6 blockade</u> for the treatment of COVID-19. Time proved him, and Lee right!
- Letter to the editor discussing caution when proposing empiric therapies for COVID-19, ignoring the lessons of history.
- Racial disparities in COVID-19 trials. We must do better at recruiting minority groups the most disproportionally affected —to COVID-19 clinical trials
- Development and discovery of a biomarker, Ferritin/procalcitonin ratio to differentiate
  patients with COVID-19 pneumonia from those with bacterial pneumonia. Preliminary
  findings were accepted as a poster presentation at the IDWeek meeting, 2020.

We have some exciting tropical medicine projects going. Please keep in touch if you would like to participate.

# TROPICAL MEDICINE ACADEMIC ACTIVITIES:

- If you are attending this year's virtual <u>IDWeek</u> meeting, please join us for my presentation on Chagas Disease: Importance of Prevention and Early Treatment. Friday, October 23, 2020. 2:45 PM – 4:00 PM EDT.
- Carlos and I are part of a Latin American group giving <u>an online tropical medicine</u> course through Panama's Gorga's institute. The course was launched to commemorate the 10th International Medical Conference in Memory of Dr. Alan Gabster. We will have all the presentations in an online platform- free for medical personnel to access. The course will include video presentations from a panel full of international, Latin American specialists in Tropical Medicine. Participants can take the course over 3 months and must complete the quizzes to receive a certificate.

For those with a Twitter account, I regularly post travel papers updates. Happy to follow each other. Twitter: @andhen25

Thanks to all of you for your ongoing dedication to our Travel medicine clinic.

Leave you with Mufasa x Hypeman spreading good vibes around the world

https://youtu.be/u5CZz4rrRY8

Best regards,

Andrés and Carlos