

Develop – DeVos Cardiovascular Research Program’s Emergency Letter on the Pandemic

Scientific Stream Update on the COVID-19 Pandemic – 4.30.20 1040

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In Nursery Home In the US: 56% of the COVID-19+ Were Asymptomatic

Article Title: Presymptomatic SARS-CoV-2 Infections and Transmission in a Skilled Nursing Facility

www.nejm.org/doi/full/10.1056/NEJMoa2008457

Source: NEJM

Clinical Field: Infectious Disease

Article Type: Clinical Report

Study Type: Retrospective Study

Patient Group: COVID-19 patients in nursery home

Intervention: N/A

Reviewer	Stefan Jovinge
Study Design	_____
Study Design Concerns	n=89. BUt proves the concept of asymptomatic COVID-19
Main Results	In a setting of a skilled nursery home 57 of 89 residents (64%) tested positive for SARS-CoV-2. Among 76 residents who participated in point-prevalence surveys, 48 (63%) tested positive. Of these 48 residents, 27 (56%) were asymptomatic at the time of testing; 24 subsequently developed symptoms (median time to onset, 4 days).of the 57 residents with SARS-CoV-2 infection, 11 had been hospitalized (3 in the intensive care unit) and 15 had died (mortality, 26%). Of the 34 residents whose specimens were sequenced, 27 (79%) had sequences that fit into two clusters with a difference of one nucleotide.
Comments	56% of patients that were positive for COVID-19 had no symptom at the time of detecting the virus.

No Worse Outcome in Patients With COVID-19 That Are On ACEi/ARB

Article Title: Association of Renin-Angiotensin System Inhibitors With Severity or Risk of Death in Patients With Hypertension Hospitalized for Coronavirus Disease 2019 (COVID-19) Infection in Wuhan, China

<https://jamanetwork.com/journals/jamacardiology/fullarticle/2765049>

Source: JAMA

Clinical Field: Cardiology

Article Type: Clinical Report

Study Type: Retrospective Study

Patient Group: Hospitalized users of ARB/ACEi users and COVID-19

Intervention: N/A

Reviewer	Stefan Jovinge
Study Design	Major Concerns
Study Design Concerns	Lack of multivariate analysis impairs the analysis by making it sensitive to confounders.
Main Results	1178 patients. Overall in-house mortality 11%. 30.7% had hypertension and of the hypertensive patients 34.8% took ARB/ACEi. 18.3. % mortality in ACEi/ARB taking hypertensives compared to 22.7% in nonACEi/ARB taking hypertensive p=0.34
Comments	No increased risk or increased LOS in hypertensives taking ACEi/ARB vs those who don't take these.

A Propensity Score Match Study Shows: Pat on ACEi/ARB Have Lower COVID-19 Mortality

Article Title: Association of Inpatient Use of Angiotensin Converting Enzyme Inhibitors and Angiotensin II Receptor Blockers with Mortality Among Patients With Hypertension Hospitalized With COVID-1

www.ahajournals.org/doi/10.1161/CIRCRESAHA.120.317134

Source: _____

Clinical Field: Cardiology

Article Type: Clinical Report

Study Type: Retrospective Study

Patient Group: Patients hospitalized with COVID-19

Intervention: N/A

Reviewer	Stefan Jovinge
Study Design	Well Designed
Study Design Concerns	Retrospective study. However, it was a propensity match study.
Main Results	The cohort of patients with hypertension of COVID-19 patients was split in ACEi/ARB and non-ACEi/ARB users. The matched cohort the HR ratio for 28-death for ACEi/ARB users (as compared to non-ACEi/ARB users) was 0.34 (0.14-0.83) p=0.02. The matched cohort was 348-174 = 522 pat.
Comments	With the adjustment for including age, gender, fever, cough, dyspnea, comorbidities (diabetes, coronary heart disease, and chronic renal disease), CT-diagnosed bilateral lung lesions, and incidence of increased CRP and creatinine, There is a significantly lower 28-day mortality in patients with COVID-19 that have hypertension controlled by ACEi/ARB.

CATS Do Get COVID-19 AND Shed SARS-CoV-2

Article Title: Confirmation of COVID-19 in Two Pet Cats in New York

www.cdc.gov/media/releases/2020/s0422-covid-19-cats-NYC.html

Source: CDC

Clinical Field: N/A

Article Type: National Document

Study Type: Other

Patient Group: COVID-19

Intervention: N/A

Reviewer	Vinu Perinjelil
Study Design	N/A
Study Design Concerns	<p>1) low incidence of reports, 4 cases overall. Probably limited testing in animals as to not undermine human testing</p> <p>2) no testing denominator, unknown how many cats/pets are tested or symptomatic to add perspective</p>
Main Results	<p>The CDC reports the first cases of SARS-CoV-2 transmission in 2 cats on April 22, 2020-the first pets in the US to test positive. Initial presentation of respiratory symptoms in each cat prompted an evaluation by veterinarians who then tested samples at a private laboratory for COVID. The owner of one cat tested positive for COVID prior to the cat showing signs, and the possibility of transmission from human to animal is unknown.</p> <p>Public officials state no evidence exists that pets play a role in the spread of COVID within the US and no measures taken against domestic animals that may compromise their welfare should be taken at this time. However the CDC recommends owners to exhibit precautions with animals and maintain social distancing with others outside their household. Cats should remain indoors and dogs should be walked on leashes maintaining 6 feet of social distance while avoiding parks/public places. CDC further recommends COVID + patients restrict interaction with pets and wear a mask if needing to take care of a pet if infected with COVID.</p> <p>In addition to these 2 cases, the USDA has documented 2 prior cases of COVID-19 in animals including a tiger and a lion. CDC reiterates testing in these animals has not precluded availability for testing in humans.</p>
Comments	<p>This is a succinct report on feline cases of SAR-CoV-2 with mild respiratory presentation. Guidance on whether pets should be tested at all or in COVID household needs to be determined by health officials, along with further investigations on the possibility of zoonotic/animal to human transmission. A case study/series may be helpful as the ability to launch or report a larger study is not feasible currently, so interpretation of</p>

	anecdotal cases may help vets/public health officials/providers establish safe social practices. Ethical considerations should be made regarding information and guidelines involving COVID affected domestic animals to avoid any possibility of animal abandonment/cruelty/mistreatment
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All COVID-19 Patients Get QTc Prolongation 11% > 200 ms QTc

Article Title: The QT interval in patients with COVID-19 treated with hydroxychloroquine and azithromycin

www.nature.com/articles/s41591-020-0888-2

Source: NATURE

Clinical Field: Cardiology

Article Type: Clinical Report

Study Type: Retrospective Study

Patient Group: Patients with COVID-19 and Azithromycin and COVID-19

Intervention: Hydroxychlorin (HCK)+Azithromycin (AZ)

Reviewer	Stefan Jovinge
Study Design	Major Concerns
Study Design Concerns	n=84 of patients treated with the HCK+AZ.
Main Results	Baseline average QTc was prolonged from 435 ± 24 ms to 463 ± 32 ms $p < 0.001$. that occurred within 3.6 ± 1.6 after initiation of therapy. 11% of patients had a severely prolonged QTc (>500 ms).
Comments	QTc prolongation is a common phenomena in the COVID-19 population treated with a combination of HCK/AZ combination. 11% got a QTC >500 ms.

Am Thoracic Soc Task Force Recommendations for COVID-19

Article Title: COVID-19: Interim Guidance on Management Pending Empirical Evidence.

www.thoracic.org/covid/covid-19-guidance.pdf

Source: American Thoracic Journal

Clinical Field: Surgery

Article Type: National Document

Study Type: Other

Patient Group: COVID-19 patients

Intervention: N/A

Reviewer	Stefan Jovinge
Study Design	Major Concerns
Study Design Concerns	The recommendations have not the latest with regard to HCK treatment
Main Results	<ol style="list-style-type: none"> 1. HCK recommended for inpatients on a a patient to patient basis. 2. Antiviral and Tocilizumab and corticosteroids left without recommendation. 3. Prone ventilation recommended. 4. ECMO recommended as a step-up procedure if ARDS is not managed through ventilation.
Comments	As above.