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

Scientific Stream Update on the COVID-19 Pandemic – 5.7.20 1607

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Self Pronining Beneficial and Feasible in Awake patients

Article Title: Early Self-Proning in Awake, Non-intubated Patients in the Emergency Department: A Single ED's Experience during the COVID-19 Pandemic

https://onlinelibrary.wiley.com/doi/abs/10.1111/acem.13994

Source: SAEM

Clinical Field: Infectious Disease

Article Type: _____

Study Type: Non-Randomized Controlled Trial

Patient Group: COVID-19

Intervention: _____

Reviewer	Kathrine A. Kelly-Schuette
Study Design	Minor concerns
Study Design Concerns	The purpose of this study is to describe a single-center experience with awake proning of non-intubated COVID-19 patients presenting with hypoxemia but no significant respiratory distress. This is an observational cohort, however it could be unethical to randomize to no proning since there was improvement seen, but another avenue would be to investigate the outcomes of similar patients who were intubated.
Main Results	50 patients were included, 44% arrived on supplemental oxygen Median SpO2 at triage was 80%, which improved to 84% with supplemental oxygen. After 5 minutes of proning, the Sp02 increased to 94%(p=0.001) 24% of patients were intubated within 24 hours of admission.
Comments	A conundrum of COVID 19 is patients presenting with hypoxia out of proportion to respiratory distress and the appropriate management in resource limited environment. Especially, when non-invasive ventilatory strategies increase risk for health care providers. It would be interesting to see how the "happy hypoxemics" do with intubation vs. awake proning. Would outcomes differ?

	Depletion of resources helps identify plausible options for improving clinical conditions, however more investigation and control is needed to determine the true utility of awake proning.

2/3 of all COVID-19 Patients Have An Alteration In Smell or Taste

Article Title: Alterations in Smell or Taste in Mildly Symptomatic Outpatients With SARS-CoV-2 Infection

https://jamanetwork.com/journals/jama/fullarticle/2765183

Source: JAMA

Clinical Field: Infectious Disease

Article Type: Clinical Study

Study Type: Retrospective Study

Patient Group: COVID-19 patientsPCR+

Intervention: N/A

Reviewer	Vinu Perinjelil
Study Design	N/A
Study Design Concerns	This is a cross-sectional study looking at the presence of smell or taste disturbance in patients with confirmed SAR-CoV-2 in Italy 1) small sample of patients, only 202 completed the survey and these were a carefully selected group of mildly asymptomatic patients available via phone 5-6 days after 2) patients were not clinically evaluated for the smell or taste disturbances, reliant on self-reporting through SNOT-22 questionnaire however reporting error could remain (under or over report) 3) data not available regarding clinical course of disturbance, worsening or improvement
Main Results	SARS-CoV-2 has been linked to anosmia and other smell and taste disturbances due to its ability as a virus to propagate the olfactory bulb and nasal epithelial cells containing highest expression of SARS-CoV-2 receptors. Anecdotal cases of anosmia have been documented but literature is limited on the prevalence of smell/taste disturbances in COVID-19 patients. This study evaluated mildly symptomatic patients with PCR confirmed COVID-19 who were being managed at home. Patients were called at home 5-6 days after the nasopharyngeal swab was performed to provide demographic information and answer the Sino-nasal Outcome Test 22 (SNOT-22). 202 out of 364 eligible patients completed the phone survey. Altered taste and smell was reported in 64.4% of patients (n=130) with a median snot score of 4 which is severe. In 6 patients, altered taste or smell was the sole symptom. 26.7% patients found the disturbances to occur after other symptoms.

Comments	SNOT questionnaire correlates with objective olfactory function but more objective tests in future would lend more validity to the assessment of anosmia. Larger groups to be studied with varying degree of illness would be helpful to evaluate.

Almost Half of COVID-19 Patients Infected by Asymptomatic Patients

Article Title: Temporal dynamics in viral shedding and transmissibility of COVID-19

www.nature.com/articles/s41591-020-0869-5

Source: NATURE

Clinical Field: _____

Article Type: Clinical Study

Study Type: _____

Patient Group: COVID-19 patients

Intervention: N/A

Reviewer	Stefan Jovinge
Study Design	Well Designed
Study Design Concerns	n=94
Main Results	44% (95% confidence interval, 25-69%) of secondary cases were infected during the index cases' pre-symptomatic stage, in settings with substantial household clustering, active case finding and quarantine outside the home.
Comments	Not only seems SARS-CoV-2 seem to shed early and in pre-symptomatic phase. The max shedding comes at the debut of symptoms.

No Drug To Treat COVID-19 Patients Is Currently Available

Article Title: COVID-19 Treatment Guidelines

www.covid19treatmentguidelines.nih.gov/introduction/

Source: NIH

Clinical Field: N/A

Article Type: National Document

Study Type: Other

Patient Group: COVID-19 Patients

Intervention: Guideline Document

Reviewer	Stefan Jovinge
Study Design	Well Designed
Study Design Concerns	_____
Main Results	Summary Recommendations The COVID-19 Treatment Guidelines Panel (the Panel) does not recommend the use of any agents for pre-exposure prophylaxis (PrEP) against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) outside of the setting of a clinical trial (AIII). The Panel does not recommend the use of any agents for post-exposure prophylaxis (PEP) against SARS-CoV-2 infection outside of the setting of a clinical trial (AIII). The Panel recommends no additional laboratory testing and no specific treatment for persons with suspected or confirmed asymptomatic or presymptomatic SARS-CoV-2 infection (AIII). At present, no drug has been proven to be safe and effective for treating COVID-19. There are insufficient data to recommend either for or against the use of any antiviral or immunomodulatory therapy in patients with COVID-19 who have mild, moderate, severe, or critical illness (AIII).
Comments	Important Guideline document.

RCT Shows That Remdesivir Has No Effect On Recovery In COVID-19 Patients

Article Title: Remdesivir in adults with severe COVID-19: a randomised, double-blind, placebo-controlled, multicentre trial

www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31022-9/fulltext

Source: Lancet

Clinical Field: Infectious Disease

Article Type: Clinical Study

Study Type: _____

Patient Group: COVID-19 patients with Hypoexewmia and <12 days of symptoms

Intervention: Remdesivir

Reviewer	Stefan Jovinge
Study Design	Minor Concerns
Study Design Concerns	n=237 The control group 1/2 the size of the intervention group.
Main Results	Remdesivir use was not associated with a difference in time to clinical improvement (hazard ratio 1·23 [95% CI 0·87-1·75]). Also in patients receiving remdesivir < 10 days after onset had not a numerically faster time to clinical improvement than those receiving placebo. (hazard ratio 1·52 [0·95-2·43]).
Comments	It could still be interesting to see if an even earlier treatment (< 3 days after onset could be beneficial and it remains to be seen.

Infection Risk Is Higher in Household Members to an Index Case But the Risk Is Only 11% If You Isolate the Index Case

Article Title: Epidemiology and transmission of COVID-19 in 391 cases and 1286 of their close contacts in Shenzhen, China: a retrospective cohort study

www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30287-5/fulltext

Source: Lancet

Clinical Field: Infectious Disease

Article Type: Clinical Study

Study Type: _____

Patient Group: _____

Intervention: _____

Reviewer	Stefan Jovinge
Study Design	Well Designed
Study Design Concerns	Retrospective report on claims of ther intervention of isolation strategies.
Main Results	Cases were older than the general population (mean age 45 years) and balanced between males (n=187) and females (n=204). 356 (91%) of 391 cases had mild or moderate clinical severity at initial assessment. As of Feb 22, 2020, three cases had died and 225 had recovered (median time to recovery 21 days; 95% CI 20-22). Cases were isolated on average 4·6 days (95% CI 4·1-5·0) after developing symptoms; contact tracing reduced this by 1·9 days (95% CI 1·1-2·7). Household contacts and those travelling with a case were at higher risk of infection (odds ratio 6·27 [95% CI 1·49-26·33] for household contacts and 7·06 [1·43-34·91] for those travelling with a case) than other close contacts. The household secondary attack rate was 11·2% (95% CI 9·1-13·8), and children were as likely to be infected as adults (infection rate 7·4% in children <10 years vs population average of 6·6%). The observed reproductive number (R) was 0·4 (95% CI 0·3-0·5), with a mean serial interval of 6·3 days (95% CI 5·2-7·6).
Comments	Astonishingly low attack rate (11%0 within households. Aggressive isolation strategies is claimed to be behind this low rate.