



Update Coronavirus

S. Becker

Facharzt für Orthopädie, Orthopädische Chirurgie
Chirotherapie, Sportmedizin

Vitalzentrum Salzburg - Grödig

Grundlagen SARS – CoV - 2

- Rund 80% der Infizierten sind Männer

Anfangssymptome:

- Leicht erhöhte Temperatur 98%
- 76% trockener Husten
- 44% Muskelschmerzen / Müdigkeit
- 30% Zytokinsturm (ARDS)

(INK Corona Vortrag Dr. med. Dietrich Klinghardt
<https://youtu.be/fgj-VT5iVh0>)

Inkubationszeit

- Auch asymptomatische Patienten können Coronavirus übertragen
- Nach Infektion 4,1 – 7 Tage asymptomatisch, Ansteckungsgefahr ab dem 7. Tag?

The **incubation time** for new infections was found to be 5.2 days, with a range of **4.1-7 days**. The longest time from infection to symptoms seemed to be 12.5 days. At this point, the epidemic had been doubling approximately every 7 days, and the base reproductive number was 2.2 (meaning every patient infects an average of 2.2 others) (Li Q, Guan X, Wu P, Wang X, et al. *Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia*. *N Engl J Med*. 2020 Jan 29.)

- Cave: CV überlebt bis zu 72h an einer Oberfläche!
- 5 Tage lang repliziert sich das Virus im Mund - Rachenraum

<https://www.medrxiv.org/content/10.1101/2020.02.06.20020974v1>

Diagnose

- (Abstrich)
- PCR Test:
<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Labor:

- Leukopenie, Lymphozytopenie
- Rö, CT Lunge

Prophylaxe

- Vorbeugend Vit.D, Zink, Vit.C iv
- Rizol Zeta Tropfen 3 x täglich
 - (Rizol Zeta: Aktivsauerstoffkomplex (Rizol-Rohstoff), Nelkenöl, Wermutöl, Walnussöl, Schwarzkümmelöl, Beifussöl, Majoranöl)
- Bei beg. Symptomen (5 Tage Virus lang in Nasen – Rachenraum):
 - Propolis – Spray (Aktivierung lokales Immunsystem)

Prophylaxe

- Hozzel – Wasser (HOCL – hypochlorige Säure, komplettes Abtöten des Virus!)
 - Joon YS et al. Viral Shedding and Environmental Cleaning in Middle East Respiratory Syndrome Coronavirus Infection
<https://icjournal.org/Synapse/Data/PDFData/0086IC/ic-47-252.pdf>:
 - Normale Desinfektionsmittel: 70% Effizienz, HOCL 100%!!
 - Tomoko, O. et al. Microbicidal Effect of Weak Acid Hypochlorous Solution on Various Microorganisms.
https://www.jstage.jst.go.jp/article/bio/17/3/17_129/_article
 - Lewis, MR Novel Coronavirus (2019-nCoV) Scope for Aqualution Hypochlorous Acid Solution for Effective Prevention and Control.
<https://www.aqualution.co.uk/2020/02/05/novel-coronavirus-2019-ncov-aqualution-effective-prevention-and-control/>

Prophylaxe

- Hozzel – Wasser (HOCL – hypochlorige Säure, komplettes Abtöten des Virus!)

To whom it may concern:

As part of our ongoing collaboration with Briotech Inc, in Washington, my microbiology laboratory has been evaluating the efficacy of BrioHOCl against human coronavirus OC43. Studies conducted to date indicate at least a 99.999% reduction in the infectivity of human coronavirus upon 10 min exposure to BrioHOCl solution. Further work is underway to characterize this important finding.

John Scott Meschke

Professor and Director of Environmental and Occupational Health Microbiology Lab Department of Environmental and Occupational Health Sciences School of Public Health, University of Washington

Rasmussen, Eric & Williams, Jeffrey. (2017). Stabilized hypochlorous acid disinfection for highly vulnerable populations: Brio HOCL™ wound disinfection and area decontamination. 1-8. 10.1109/GHTC.2017.8239259.

NSAR und Covid19

- 17.03.20: Die Weltgesundheitsorganisation WHO rät beim Verdacht auf eine Coronavirus-Infektion von der Einnahme von Ibuprofen ohne ärztlichen Rat ab.
- 19.03.20: Die Weltgesundheitsorganisation (WHO) hat ihre Warnung vor der Einnahme des Schmerzmittels Ibuprofen bei Verdacht auf eine Infektion mit dem neuen Coronavirus zurückgenommen.
- Health Canada continues to recommend both ibuprofen and acetaminophen for treatment of fever due to COVID-19.1
 - Evidence to date suggests that older people (>60 years of age) and those with underlying medical conditions are at higher risk of severe COVID-19 disease. As NSAIDs should also be used with caution in these populations, it is reasonable to avoid NSAIDs in the elderly and in those with comorbid conditions (e.g., cardiovascular disease, renal disease, chronic respiratory disease).
 - <https://www.pharmacists.ca/cpha-ca/assets/File/cpha-on-the-issues/Use-of-NSAIDs-in-patients-with-COVID-19-FINAL-EN.pdf>
- Frankreich verbietet NSAR und Aspirin bei Covid19:
<https://www.theguardian.com/world/2020/mar/14/anti-inflammatory-drugs-may-aggravate-coronavirus-infection>.

NSAR und Immunsystem

Articles | Published: January 2007

Immunomodulatory effect of nonsteroidal anti-inflammatory drugs (NSAIDs) at the clinically available doses

[Jae Youl Cho](#) 

[Archives of Pharmacal Research](#) 30, Article number: 64 (2007) | [Cite this article](#)

[Cell Immunol.](#) Author manuscript; available in PMC 2010 Jan 1.

Published in final edited form as:

[Cell Immunol.](#) 2009; 258(1): 18–28.

Published online 2009 Apr 5. doi: [10.1016/j.cellimm.2009.03.007](https://doi.org/10.1016/j.cellimm.2009.03.007)

PMCID: PMC2693360

NIHMSID: NIHMS103324

PMID: [19345936](https://pubmed.ncbi.nlm.nih.gov/19345936/)

Ibuprofen and other widely used non-steroidal anti-inflammatory drugs inhibit antibody production in human cells

[Simona Bancos](#),¹ [Matthew P. Bernard](#),¹ [David J. Topham](#),² and [Richard P. Phipps](#)^{1,*}

[J Immunol.](#) 2006 Dec 1;177(11):7811-9.

Cyclooxygenase-2 inhibition attenuates antibody responses against human papillomavirus-like particles.

[Ryan EP](#)¹, [Malboeuf CM](#), [Bernard M](#), [Rose RC](#), [Phipps RP](#).

ACE Hemmer und Immunsystem, Selen!

ACE inhibitors: Medical ACE inhibitors are used to treat hypertension. They are effective and believed to be safe (Synthesis, Characterization and Antioxidant Activity of Angiotensin Converting Enzyme Inhibitors – PubMed <https://pubmed.ncbi.nlm.nih.gov/21186397/>)

However, they are known to increase expression of ACE-2 and therefore are known to increase the virulence of the virus.

Using ACE inhibitors either through medication or supplements may risk elevating COVID-19 infection and developing severe or even fatal disease complications (Are patients with hypertension and diabetes mellitus at increased risk for COVID-19 infection? – The Lancet Respiratory Medicine [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(20\)30116-8/fulltext?fbclid=IwAR0_oLtc0-5KXduNO-5w6MMsrUyHfo7xDWThnXJEtcPO5S1xPwnzHi8Pw7U#bib4](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30116-8/fulltext?fbclid=IwAR0_oLtc0-5KXduNO-5w6MMsrUyHfo7xDWThnXJEtcPO5S1xPwnzHi8Pw7U#bib4))

However, it is little known, that nutritional selenium may also be an effective inhibitor of angiotensin-converting enzyme (ACE) (Selenium Inhibition of angiotensin-converting enzyme by selenoneine | SpringerLink <https://link.springer.com/article/10.1007/s12562-019-01321-3?fbclid=IwAR2831B7dwtwUy6ehty61SqOr8hITdlBmRo1geTrcGXOaYnlb4bFXzVlob8>)

ACE und Selen absetzen!!

Therapie

- Frühe Phase:
 - Vit. C 30 g in 3 Tagen iv

In a press release from a Chinese hospital specializing in infectious disease it was observed that intravenous vitamin C was extremely effective in treating affected and infected patients: the dose of 100-200 mg/kg body weight was given intravenously for 3 days in a row (this equals to only 7.5 – 15 grams for a 75 kg (180 lbs.) person (大剂量维生素C治疗新冠肺炎的交二方案 发布时间：2020-02-21 11:00:56 浏览次数：5870). The treatment is scheduled for a government sponsored trial: *"Clinical Trials.gov dentifier NCT04264533, ZhiYong Peng, Zhongnan Hospital"*

In the US, the pioneers of orthomolecular medicine also published a consensus paper on the use of Vit C: Orthomolecular Medicine News Service, Feb 16, 2020 *"Early Large Dose Intravenous Vitamin C is the Treatment of Choice for 2019-nCov infected Pneumonia"* Richard Z Cheng, MD, PhD; Hanping Shi, MD, PhD; Atsuo Yanagisawa, MD, PhD; Thomas Levy, MD, JD; Andrew Saul, PhD.

Therapie (Chloroquin)

Biochem Biophys Res Commun. 2004 Oct 8;323(1):264-8.

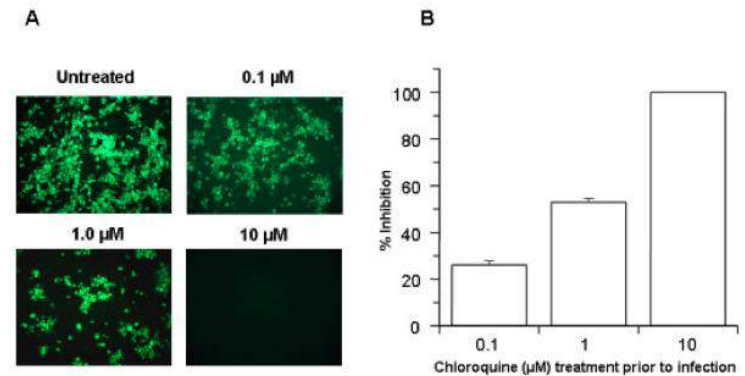
In vitro inhibition of severe acute respiratory syndrome coronavirus by chloroquine.

Keyaerts E¹, Vijgen L, Maes P, Neyts J, Van Ranst M.

Abstract

We report on chloroquine, a 4-amino-quinoline, as an effective inhibitor of the replication of the severe acute respiratory syndrome coronavirus (SARS-CoV) in vitro. Chloroquine is a clinically approved drug effective against malaria. We tested chloroquine phosphate for its antiviral potential against SARS-CoV-induced cytopathicity in Vero E6 cell culture. Results indicate that the IC₅₀ of chloroquine for antiviral activity (8.8 +/- 1.2 microM) was significantly lower than its cytostatic activity; CC₅₀ (261.3 +/- 14.5 microM), yielding a selectivity index of 30. The IC₅₀ of chloroquine for inhibition of SARS-CoV in vitro approximates the plasma concentrations of chloroquine reached during treatment of acute malaria. Addition of chloroquine to infected cultures could be delayed for up to 5h postinfection, without an important drop in antiviral activity. Chloroquine, an old antimalarial drug, may be considered for immediate use in the prevention and treatment of SARS-CoV infections.

Therapie



- The study shows that chloroquine is effective in preventing SARS-CoV infection in cell culture if the drug is added to the cells 24 h prior to infection

US CDC, Vincent MJ , Bergeron E , Benjannet S , et Al .Chloroquine IS A potent inhibitor of SARS coronavirus Infection and Spread of[J].Virology Journal,2005,2(.1):69.The DOI: 10.1186 / 1743-422X-2-69

Therapie

- Nitaxozanid, Alinia: Antiparasitenmittel, 1000mg 2 x täglich für 10 Tage

J Infect Public Health. 2016 May-Jun;9(3):227-30. doi: 10.1016/j.jiph.2016.04.001. Epub 2016 Apr 16.

Nitazoxanide, a new drug candidate for the treatment of Middle East respiratory syndrome coronavirus.

Rossignol JF¹.

- Chloroquinphosphat (Resochin) 500 mg, 2 x täglich über 10 Tage

According to a consensus statement from a multicenter collaboration group in China, chloroquine phosphate 500-mg twice daily in tablet form for 10 days may be considered in patients with COVID-19 pneumonia (Multicenter collaboration group of Department of Science and Technology of Guangdong Province and Health Commission of Guangdong Province for chloroquine in the treatment of novel coronavirus pneumonia. [Expert consensus on **chloroquine phosphate** for the treatment of novel coronavirus pneumonia]. Zhonghua Jie He He Hu Xi Za Zhi. 2020 Feb 20. 43:E019.).

Therapie

- 600 mg Hydroxychloroquin
- Azithromycin 500 mg Tag 1, dann 250 mg pro Tag für 4 Tage
- 40 Patienten, 20 in Verum Gruppe
- Alle Patienten geheilt innerhalb von 6 Tagen, auch kein Virus mehr nachweisbar!

Gautret et al. (2020) Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial. International Journal of Antimicrobial Agents – In Press 17 March 2020 – DOI : 10.1016/j.ijantimicag.2020.105949

An Effective Treatment for Coronavirus (COVID-19)

Presented by: James M. Todaro, MD (Columbia MD, jtodaro2@gmail.com) and Gregory J. Rigano, Esq. (grigano1@jhu.edu)

In consultation with Stanford University School of Medicine, UAB School of Medicine, MIT, Yale University and National Academy of Sciences researchers.

March 13, 2020

- „Chloroquine can both prevent and treat coronavirus in primate cells. According to South Korean and China human treatment guidelines, chloroquine is effective in treating COVID-19. Given chloroquine’s human safety profile and existence, it can be implemented today in the U.S., Europe and the rest of the world. Medical doctors may be reluctant to prescribe chloroquine to treat COVID-19 since it is not FDA approved for this use. The United States of America and other countries should immediately authorize and indemnify medical doctors for prescribing chloroquine to treat COVID-19“

Therapie

- Artesunat : effektiver Naturwirkstoff aus dem Chinesischen Beifuß (*Artemisia annua*), Antimalariamittel, gegen Borrelien
 - 250 mg / d iv. oder als Tinktur
- *Andrographis paniculata* (König der Bitterstoffe):
 - Furininhibitor (Furine aktivieren SARS – CoV2, 1000 mal einfacher, in Zelle einzudringen und Auslöser Zytokinsturm!!)
 - Zytokinsturm wird gehemmt, 1 Pipette 4/d Prophylaxe, 1/h als Therapie)
 - Vit. C wirkt auch als Anti – Furin!!

Andrographis paniculata is a powerful anti-furin strategy and should be utilized early in the treatment of infected or suspected individuals!
Basak, Ajoy, et al. "Inhibition of proprotein convertases-1,-7 and furin by diterpenes of *Andrographis paniculata* and their succinoyl esters."
Biochemical Journal 338.1 (1999): 107-113.

Basak, Ajoy. "Inhibitors of proprotein convertases." *Journal of molecular medicine* 83.11 (2005): 844-855.

Zytokinsturm

- NLRP3 Inflammasome
 - Hemmung durch Vit. C, MELATONIN!!, Summen

None of the pregnant mothers infected by COVID-19 admitted to Zhongnan Hospital of Wuhan University, Wuhan, China, **developed severe pneumonia or died; nor were their babies** infected by COVID-19 (Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records – **The Lancet** [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30360-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30360-3/fulltext)).

Why is mom and baby protected? Melatonin secretion in the third trimester of pregnancy is more than doubled compared to the first trimester. (Voiculescu SE, Zygouropoulos N, Zahiu CD, Zagrean AM. Role of melatonin in embryo fetal development. J Med Life. 2014;7(4):488–492.)

INI

- WLAN / EMF exposure unterdrückt Melatoninproduktion!!



Environmental Research
Volume 164, July 2018, Pages 405-416



Wi-Fi is an important threat to human health ☆

Martin L. Pall ✉

<https://www.instagram.com/tv/B92oaLLHYr0>

S. Becker 2020

Summen?

- Stickoxid hemmt NLRP3 Inflammasom Produktion
- NO tötet Keime (Bakterien / Viren in Schleimhaut)

In rodent sepsis models, **nitric oxide was demonstrated to inhibit NLRP3 activation** (Nitric oxide suppresses NLRP-3 inflammasome activation and protects against LPS-induced septic shock <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3567828/>)

Nitric oxide produced in nasal passages is part of the defense system against bacterial and viral infections (High Nitric Oxide Production in Human Paranasal Sinuses – PubMed <https://pubmed.ncbi.nlm.nih.gov/7585069-high-nitric-oxide-production-in-human-paranasal-sinuses/?dopt=Abstract>)

Newborns have been found to have an extremely high level of nitric oxide in their barely developed paranasal sinuses (Infant nasal nitric oxide over time: natural evolution and impact of respiratory tract infection | European Respiratory Society <https://erj.ersjournals.com/content/51/6/1702503>)

Vit C increases NO (COVID-19 Mutations, Vaccines & Nitric Oxide – The Vitamin C Connection – EvolutaMente.it <https://www.evolutamente.it/covid-19-mutations-vaccines-nitric-oxide-the-vitamin-c-connection/>)

Simple **Humming** while exhaling instantly increases the nitric oxide concentration in the nasal passages and sinuses – the very tissues, where covid-19 lingers for many days before infecting other tissues (Weitzberg, Eddie, and Jon ON Lundberg. "Humming greatly increases nasal nitric oxide." *American journal of respiratory and critical care medicine* 166.2 (2002): 144-145.)



Danke fürs Zusehen und Zuhören,
Alles Gute!!