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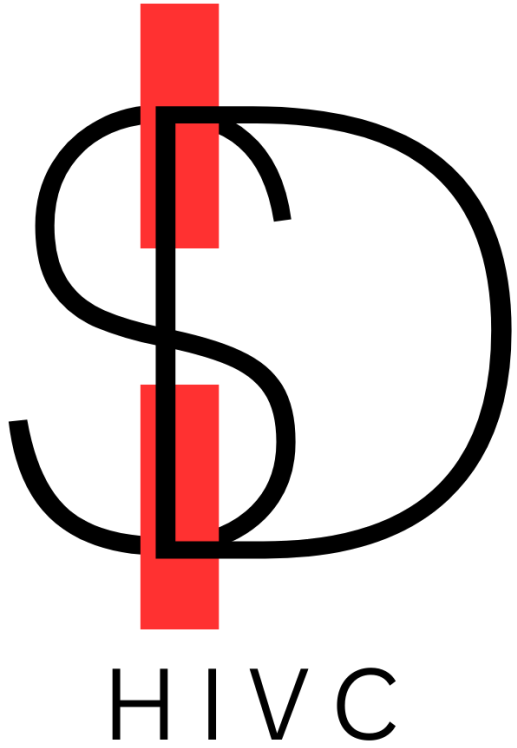
Alternatives to COVID-19 mRNA vaccine: Perspective from a person living with HIV



Pemivibart (Pemgarda)

Emergency use authorization (EUA) 3/2024 for patients >11yo who are moderately to severely immunocompromised. Monoclonal antibody; 500mg IV infusions x 4 Q3 months. One-hour infusion followed by a two-hour observation period.

Shows activity against some contemporary SARS-CoV-2 variants. Previous monoclonal antibody infusion, Tixagevimab-cilgavimab, EUA withdrew due to inactivity against contemporary variants.

Masking…

- Per CDC guidelines immunocompromised patients should enlist the most effective mask they have access to, up to N95, in public indoor settings when area hospitalizations for COVID-19 are high.

Hydroxychloroquine

No PreP data for current variants due to several negative PreP efficacy RCT trial results targeting previous variants.

EUA pulled by FDA after about 3 month early in pandemic due to negative PreP and treatment trails as well as cardiac dysrhythmia side effect concerns.

One example in HCW at high risk of exposure: Hydroxychloroquine 600mg daily x 8 weeks for health care workers (2021); study terminated earl for futility at n=132, goal n=200, full-time employees.

Some feel that exaggerated cardiac risk concerns and early pandemic "statistically significant" negative studies lead to biased early termination of PreP efficacy studies.

COPOV study: Hydroxychloroquine PreP meta analysis 2022

Review Eur J EpidemiolSystematic review and meta-analysis of randomized trials of hydroxychloroquine for the prevention of COVID-19

- Background: Recruitment into randomized trials of hydroxychloroquine (HCQ) for prevention of COVID-19 has been adversely affected by a widespread conviction **that HCQ is not effective for prevention**. In the absence of an updated systematic review, we conducted a meta-analysis of randomized trials that study the effectiveness of HCQ to prevent COVID-19.

- Methods: A search of PubMed, medRxiv, and clinicaltrials.gov combined with expert consultation found 11 completed randomized trials: 7 pre-exposure prophylaxis trials and 4 post-exposure prophylaxis trials. We obtained or calculated the risk ratio of COVID-19 diagnosis for assignment to HCQ versus no HCQ (either placebo or usual care) for each trial, and then pooled the risk ratio estimates.

COPOV study: Hydroxychloroquine PreP meta analysis 2022

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- Results: The pooled risk ratio estimate of the pre-exposure prophylaxis trials was 0.72 (95% CI: 0.58-0.90) when using either a fixed effect or a standard random effects approach, and 0.72 (95% CI: 0.55-0.95) when using a conservative modification of the Hartung-Knapp random effects approach. The corresponding estimates for the post-exposure prophylaxis trials were 0.91 (95% CI: 0.72-1.16) and 0.91 (95% CI: 0.62-1.35). All trials found a similar rate of serious adverse effects in the HCQ and no HCQ groups.
- ***Confusing statistics, depends on statisitical method used above, two approaches showed significance and one did not.***
- Discussion: A benefit of HCQ as prophylaxis for COVID-19 cannot be ruled out based on the available evidence from randomized trials. However, the "not statistically significant" findings from early prophylaxis trials were widely interpreted as definite evidence of lack of effectiveness of HCQ. This interpretation disrupted the timely completion of the **remaining** trials and thus the generation of precise estimates for pandemic management before the development of vaccines.

COPCOV author conclusions...

- Despite results of COPCOV study, a double-blind placebo-controlled evaluation of CQ and HCQ for COVID-19 chemoprevention, authors concluded that although demonstrated as being a well-tolerated and safe modality in PreP use with some moderate evidence of protection against symptomatic COVID and workdays lost in the limited HCQ arm, CQ and HCQ are unlikely to be used as COVID PreP at this stage with current COVID variants. Although may have utility in future pandemics.
- RCT trials should be implemented and protected early so that evidence is generated rapidly and evidence-based policies can be implemented without delay.

Ivermectin

No PreP data for current variants due to several negative PreP efficacy studies results targeting previous variants.

Now widely accepted as having no current role COVID in treatment or prevention.

Novavax

Novavax is the only current updated protein subunit vaccine for patients unable to tolerate mRNA vaccine options (Moderna, Pfizer-BioNTech, Comirnaty and Spikevax).

Novavax efficacy of 90% in its clinical trial. No head-to-head studies to date but less patients in Novavax clinical trial reported side effects of fever, muscle pains and headaches. There were 5 cases of myocarditis or pericarditis in the Novavax studies.

- Per the WHO and CDC antibody test results should not be used to decide if you need COVID vaccine or booster.
- No clear connection between serologies and vaccine need as antibody test may not detect the type of antibodies individual patients develop after vaccination or infection.
- Abs detected in blood reflect only one part of your immune response, which also includes T-cells and other components of the body’s immune system.

Timing of vaccine after COVID infection:

- CDC guidelines suggest waiting **at least 3 months** after COVID infection before considering booster.

- Again, NOT to be determined by COVID ab serologies.

McCullough Protocol: No RCTs to date.

McCullough et al. recently published (2023) the first rationale for spike protein detoxification, called the McCullough protocol: base spike detoxification.

The protocol includes a natural triple-agent oral regimen of nattokinase, bromelain, and curcumin that proposes four putative, primary mechanisms of action:

1) proteolytic degradation of spike protein,

2) inhibition of inflammation from spike protein and its fragments in tissues,

3) dissolution of microthrombi, and 4) anticoagulation.

Dr. McCullough is selling the triple-agent therapy on his website for $119.

Proposed mitigation of spike protein effects, no RCTs to date.