Hydroxychloroquine and azithromycin as a treatment of COVID-19

Bottom line:

A small clinical trial in France showed dramatic decreases in detectable COVID-19 virus levels in patients who received the combination of treatment with hydroxychloroquine and azithromycin. Though these numbers are striking, they should be viewed with caution, because they represent very small numbers of patients, they do not represent clinical cure of the disease, and because there was significant dropout of patients in this study.

Details:

This nonrandomized study of 36 COVID-19 positive patients examines whether or not treatment with hydroxychloroquine and azithromycin was associated with higher rates of having a negative COVID-19 nose swab 6 days after disease diagnosis. Of the 36 patients, 6 received hydroxychloroquine and azithromycin, 14 received hydroxychloroquine alone, and 16 received supportive treatment. 100% of COVID-19 positive patients who received the combination of treatment with hydroxychloroquine and azithromycin tested negative for COVID when retested in 6 days, compared with 57.1% of those who received hydroxychloroquine alone and 12.5% of those who received no medication, all statistically significant.

Of note, this study excluded from the analysis 6 patients who began treatment with hydroxychloroquine but did not finish taking it. This matters because 3 of these 6 patients were excluded because they ended up in the ICU, one died, one was lost to followup and one left the study due to medication side effects, all of which would be considered negative clinical outcomes. If these patients had been included in the analysis following standard procedure, the results would be much less striking.

Key takeaways:

- This study should be considered a first step towards identifying COVID-19 treatments.
- The combination of hydroxychloroquine and azithromycin should go into immediate clinical trials, preferably randomized controlled trials, to assess the effectiveness and safety of the drug combination in patients with mildly symptomatic and seriously symptomatic COVID-19 disease.

Note: pre-print article, not yet peer reviewed

Social distancing strategies for curbing the COVID-19 epidemic

Bottom Line:

New modeling data suggest that current 'one-time' distancing policies will result in an overall reduction in spring/early summer cases of COVID-19, but will likely lead to a delayed fall or winter COVID-19 peak. Intermittent distancing measures can maintain control of the epidemic, but without other interventions, these measures may be necessary into 2022.

Details:

Social distancing is necessary to curb the spread of the COVID-19 virus, but the scope, scale, and duration of this intervention is unknown. Researchers at the Harvard T.H. Chan School of Public Health Department of Immunology and Infectious Disease developed models to simulate the transmission of the COVID-19 virus through 2022 that includes seasonal variation in disease rates.

New York City Health and Hospitals: Office of Population Health

These models indicate that a single period of social distancing will not be sufficient to prevent critical care capacities from being overwhelmed by the COVID-19 epidemic, and that under current critical care capacities, the overall duration of the epidemic could last into 2022, with social distancing measures being required between 25% and 70% of that time.

Key Takeaways:

- A single period of social distancing policies may control COVID-19 during the summer, but will likely lead to an intense resurgence in the autumn/winter, which will coincide with other disease peaks such as flu season.
- Intermittent social distancing is recommended over one-time social distancing;
 - Intermittent social distancing strategy requires coordinated data collection of:
 - COVID infection levels in the community
 - critical care capacity
 - such strategies may be necessary through 2022 unless other interventions are enacted
- Other interventions that may reduce the duration of the epidemic and improve care are:
 - Increasing critical care capacity
 - Discovering treatments
 - Developing a vaccine

Note: pre-print article, not yet peer reviewed

Prisons and custodial settings are part of a comprehensive response to COVID-19

Bottom Line:

Custodial settings such as jails, prisons, and detention centers need to be explicitly included in the wider public health planning and response to COVID-19 in a transparent way. Close contact of individuals, sanitary conditions, access to healthcare services and higher burden of comorbidities leave custodial settings particularly vulnerable to infectious disease outbreaks.

Details:

COVID-19 outbreaks in custodial settings have the potential to spread rapidly, overwhelm prison health services and add additional demand on the healthcare system. Individuals in custodial settings have disproportionate burden of comorbidities and are at increased risk for severe COVID-19 disease.

Environmental and structural factors in custodial settings can lead to increased risk of an explosive outbreak including close contact of individuals, sanitary conditions, access to timely healthcare services and the multiple modes of possible spread (inmate to inmate, staff to inmate, visitor to inmate, visitor to staff). WHO has issued guidance for prisons responding to COVID-19.

Key Takeaways:

- WHO has issued guidance for prisons responding to COVID-19
- There is frequent transition between custodial settings and the wider community thus prisons and other custodial settings (ie. detention centers) should be included and not separated from wider public health efforts.