

Current Status on the Guidance for Specific SARS-Cov-2 Treatment

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Introduction

Coronavirus disease (COVID-19), which appeared in China in December 2019, presents a global challenge, particularly as there is absence of definitive treatment. To date, over 1,698,626 cases have been confirmed, 376,677 of whom recovered and over 102,774 deaths [1].

Presently there is no vaccine or approved anti-viral drug is available to treat COVID-19. The management of patients mainly focuses on the provision of supportive care such as fluid management, oxygenation

and ventilation for the critically ill. Substantial clinical data to support evidence based practices is limited.

Specific Treatment Options for COVID-19

A summary on the current status of drug options for COVID-19 (infection with SARS-CoV-2) currently practiced in various countries is presented below (Table 1). These are mainly patients who have been admitted because of serious symptoms of illness.

Source*	Specific anti-COVID-19 treatments
Centre For Disease Control And Prevention, USA[2]	No specific treatment for COVID-19 is currently available.
	Investigational Therapeutics
	Currently no antiviral drugs licensed by the US. Food and Drug Administration (FDA) to treat patients with COVID-19.
	Remdesivir is an investigational antiviral drug that was reported to have in-vitro activity against SARS-CoV-2.
WHO (World Health Organization) [3] Interim guidance on Clinical management of severe acute respiratory infection when novel coronavirus (nCoV) infection is suspected	Hydroxychloroquine is currently under investigation in clinical trials for pre-exposure or post-exposure prophylaxis of SARS-CoV-2 infection.
	No current evidence to recommend any specific anti-COVID-19 treatment for patients with confirmed COVID-19.
Chinese Clinical Guidance for COVID-19 Pneumonia Diagnosis and Treatment (7th edition)[4]	Antiviral therapy:
	Alpha-interferon – 5 million units for adults, add 2 ml water, 2 times daily inhalation
	Lopinavir/Ritonavir – 200 mg/50 mg/capsule, 2 capsules each time twice daily for adults, not to exceed 10 days
	Ribavirin – (combination with interferon or lopinavir/ritonavir) 500 mg each time for adults, 2-3 times intravenous infusions per day, not to exceed 10 days)
	Chloroquine phosphate – Adults>50 Kg, 500 mg each time, twice daily for 7 days. For patients<50 Kg, 500 mg each time, twice daily for day 1 and 2, once daily for day 3-7. (Not to be used in heart disease patients).
	Abidol 200 mg each time, 3 times a day for adults, not to exceed 10 days can be tried.
	Recommended not to use 3 or more antivirals at the same time.
Dutch Working Party on Antibiotic Policy (SWAB) [5]	Inappropriate use of anti-bacterial should be avoided.
	Chloroquine base or Hydroxychloroquine
	Combination therapy: Chloroquine or hydroxychloroquine plus remdesivir OR Monotherapyremdesivir
Guidelines on Clinical Management of COVID – 19, India [6]	In patients with severe disease and requiring ICU management:
	Hydroxychloroquine (Dose 400mg BD – for 1 day followed by 200mg BD for 4 days) in combination with

	Azithromycin (500 mg OD for 5 days)
Saudi Centre for Disease prevention and Control [7,8]	Since there are no treatment recommendation is available, it is recommended to follow current MERS-CoV treatment guidelines.
	As per World Health Organization (WHO), no current evidence from randomized clinical trails to recommend any specific anti-MERS-CoV treatment for patients with suspected or confirmed MERS
	Antiviral Treatment Guidelines for Middle East Respiratory Syndrome (Korean Society of Infectious Diseases)7
	Ribavirin 2,000 mg po loading dose
	→ 1,200 mg po q8h for 4 days
	→ 600 mg po q8h for 4-6 days
	Interferon-α2a-180 µg per week for 2 weeks
Lopinavir/ritonavir 400 mg/100 mg po q12h for 10 days	
Interim Clinical Guidance for Patients Suspected of/Confirmed With Covid-19 In Belgium [9]	Hydroxychloroquine, if no contraindication 400 mg at diagnosis; 400 mg 12 h later. Followed by 200 mg BID up to Day 5
	If no hydroxychloroquineavailable, consider chloroquine base 600 mg (10 mg/kg) at diagnosis and 300mg (5 mg/kg) 12 h later, followed by 300 mg (5 mg/kg) BID up to Day 5 OR chloroquine phosphate 1000mg at diagnosis and 500mg 12h later, followed by 300mg BID up to day 5.
	Consider lopinavir/ritonavir 400/100 mg (2 tablets of 200/50 mg) BID for 14 days) as second choice only if hydroxychloroquine/chloroquine contra-indicated and provided it can be administered within 10 days after symptoms onset (check also drug interaction); or in children<10 kg (after specialist advice)
	Remdesivir (compassionate use)
	200 mg loading dose (IV, within 30 min)
	100 mg OD for 2 to 10 days
	In case antibiotics must be provided, consider to add azithromycin (given its possible synergistic effect with hydroxychloroquine) but with a particular caution for interaction and QTc prolongation (daily ECG or cardiac monitoring)
South Korean Guidelines [10,11]	Lopinavir 400 mg/ritonavir 100 mg (2 tablets, twice a day) or Chloroquine 500mg orally per day
New South Wales (NSW) Health Interim Guidance on use of antiviral therapy in COVID-19 [12]	Lopinavir/ritonavir ± hydroxychloroquine
	No indications to prescribe drugs such as ribavirin, interferons, anti-IL-6 agents, oseltamivir or corticosteroids for COVID-19 illness alone. Oseltamivir has a role if there is co-infection with influenza; corticosteroids have other indications in critically ill patients.
	Remdesivir has anecdotally shown promise and a clinical trial will report preliminary results shortly. Remdesivir is currently unavailable in Australia.
Management of patients on dialysisand with kidney transplant during Covid- - 19 coronavirus infection. Brescia Renal Covid Task Force, Italy [13]	Haemodialysis patients
	Antiviral therapy (duration: 5-20 days to be determined based on clinical progression)
	Lopinavir/ritonavir 200/50 mg 2 tabs × 2/day OR
	Darunavir 800 mg 1 tab/day+ritonavir 100 mg 1 tab/day OR
	Darunavir/cobicistat 800/150 mg 1 tab/day
	Hydroxychloroquinine 200 mg after each dialysis session (three times a week in patients on dialysis twice weekly)
	Renal transplant patients
	Antiviral therapy (duration: 5-20 days to bedetermined based on clinical progression)
	Lopinavir/ritonavir 200/50 mg 2 tabs × 2/day OR
	Darunavir 800 mg 1 tab/day+ritonavir 100 mg 1 tab/day OR

	Darunavir/cobicistat 800/150 mg 1 tab/day
	Hydroxychloroquine
	200 mg ×2/day if GFR>30 ml/min
	200 mg/day if GFR>15 ml/min and<30 ml/min
	200 mg every other day if GFR<15 ml/min
	Consider combination with Tocilizumab
	For COVID-19 patients who have been admitted to the hospital, panel recommends
Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19 [14]	Hydroxychloroquine/chloroquine in the context of a clinical trial.
	Hydroxychloroquine/chloroquine plus azithromycin only in the context of a clinical trial.
	Combination of lopinavir/ritonavir only in the context of a clinical trial.
	Tocilizumab only in the context of a clinical trial.
	Convalescent plasma in the context of a clinical trial
	Consider COVID-19 investigational drugs:
	Remdesivir IV – 200 mg × 1 then 100 mg IV daily until 10 days
	Chloroquine 500 mg BID × 10 days OR Hydroxychloroquine 200 mg 2 tabs BID day 1 then 1 tab BID × 9 days.
	Tocilizumab 400 mg IV single dose
Philippines Society for Microbiology and Infectious Disease. Interim Guidelines on the Clinical Management for Adult Patients with Suspected or Confirmed COVID-19 Infection [15]	Lopinavir/ritonavir 200/50 mg 2 tabs BID PO × 14 days
	Asymptomatic healthcare workers involved in the care of suspected or confirmed cases of COVID-19
	400 mg twice a day on day 1, followed by 400 mg once weekly for next 7 weeks; to be taken with meals
	Asymptomatic household contacts of laboratory confirmed cases
Prophylaxis**	400 mg twice a day on day 1, followed by 400 mg once weekly for next 3 weeks; to be taken with meals
Advisory on the use of hydroxychloroquine as prophylaxis for SARS-CoV-2 infection[16]	400 mg twice a day on day 1, followed by 400 mg once weekly for next 3 weeks; to be taken with meals
National Task force for COVID-19 (ICMR-Indian Council for Medical Research)	400 mg twice a day on day 1, followed by 400 mg once weekly for next 3 weeks; to be taken with meals
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*Patient eligibility criteria based on disease severity and condition of patient; **High risk population	

Table 1: Current status on guidance for specific anti-COVID-19 treatments.

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