BC COVID THERAPEUTICS COMMITTEE (CTC)

Clinical Practice Guide for Assessment and Prevention of Disseminated Strongyloidiasis in Patients Hospitalized with COVID-19

BACKGROUND

Many patients are asymptomatic carriers of strongyloides

Strongyloidiasis is a disease caused by a parasitic nematode *Strongyloides sectoralis*, which is found throughout the topics and sub-tropics world-wide (see map). It is estimated that 30-100 million people who were born in, lived in, or travelled to endemic areas for > 6 months are infected with *Strongyloides,* most of whom are asymptomatic, long-term carriers. Such patients, should they become immunosuppressed, are at risk of developing a severe form of disseminated strongyloidiasis which can lead to potentially fatal illness.

Immunosuppression, including through COVID-19 therapy, is a risk factor for disseminated strongyloidiasis

There is no precise cut-off for drug-related immunosuppression that is associated with disseminated strongyloidiasis in intestinal carriers; however, the Committee to Advise on Tropical Medicine and Travel (CATMAT) Guidelines cite that patient taking a cumulative dose of 20mg of prednisone/day for ≥ 2 weeks or equivalent are at high risk of hyper-infection and disseminated disease and should be screened and/or treated.

COVID-19 treatment of hospitalized patients includes corticosteroids, namely dexamethasone 6mg/day for 10 days or until discharge. The CATMAT prednisone-equivalent limit for screening and/or treatment is attained at day 7 of the typical dexamethasone regimen for COVID-19. Critically ill patients also receive a second immunomodulator (tocilizumab, sarilumab or baricitinib), meeting this threshold upon receipt of these drugs.

Screening and Pre-emptive Treatment of at-Risk Patients with COVID-19

CATMAT recommends that all patients who are anticipated to receive the abovementioned cumulative dose of immunosuppressants are screened for strongyloides using serology and offered treatment if the test is positive. However, currently, the turn-around-time for test results is 1-2 weeks due to temporary problems with testing kits locally. The COVID-19 Therapeutic Committee has issued the following guidance for screening and management of at-risk patients with COVID-19 considering the excessively long TAT:

RECOMMENDATION: For patients who were born in, lived in, or travelled (> 6 mo) to areas where strongyloides prevalence is high (Southeast Asia, Oceania, Sub-Saharan Africa, South America, Caribbean) or moderate (Mediterranean countries, Middle East, North Africa, Indian sub-continent, Asia); see map,

- ***Pre-emptive treatment with ivermectin* is recommended in critically ill patients*** *receiving both corticosteroids and IL-6 or JAK inhibitors such as tocilizumab, sarilumab or baricitinib for COVID-19*
  - **Dose of ivermectin=200mcg/kg of actual body weight (rounded to the nearest 3mg tablet) PO x 1 dose, repeat once the next day*
- ***Serology testing is recommended for severely ill patients*** *receiving only corticosteroids for COVID-19*, and treatment with ivermectin initiated if serology is positive/reactive or indeterminant and if the patient is still hospitalized
  - *Serology should be ordered as "STAT" to ensure the fastest turn-around-time (~1 week currently)*

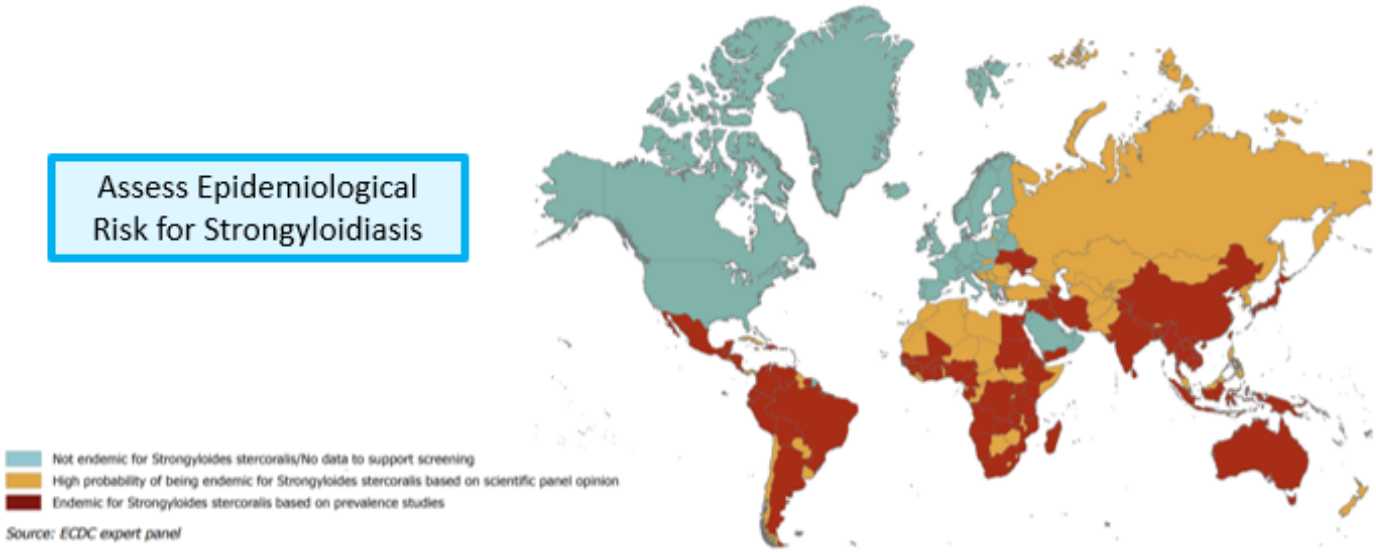
This guidance will be updated as soon as local testing provides a more rapid turn-around-time.

Ivermectin is not a treatment for COVID-19 and should not be used or promoted as an agent effective against the SARS-CoV-2 virus.

An infectious diseases specialist should be consulted if the at-risk patient with COVID-19 is showing signs and symptoms of any form of disease caused by Strongyloides (e.g., localized intestinal symptoms, hyper-infection, disseminated strongyloidiasis).

Assessment and Prevention of Disseminated Strongyloidiasis in Hospitalized Patients Receiving Immunosuppression for COVID-19

Assess Epidemiological Risk for Strongyloidiasis



	Low Risk	Medium Risk Area	High Risk Area
Geographical Areas	North or Western Europe, North America	Some Mediterranean countries, Middle East, North Africa, parts of Asia	Southeast Asia, Oceania, Sub-Saharan Africa, Central and South America, Caribbean
Critically Ill COVID-19 *Receiving corticosteroids AND tocilizumab, sarilumab or baricitinib*	Monitor	***Give pre-emptive treatment with ivermectin*** *200mcg/kg (rounded to the nearest 3mg tablet) PO x 1 dose, repeat once the next day*	
Severely Ill COVID-19 *Receiving corticosteroids only*	Monitor	***Order STAT strongyloides serology testing*** *and treat with ivermectin if serology is positive/reactive or indeterminant and the patient is still hospitalized*	

References:

1. Boggild AK, Libman M, Greenaway C, McCarthy AE, on behalf of the Committee to Advise on Tropical Medicine and Travel (CATMAT). CATMAT statement on disseminated strongyloidiasis: Prevention, assessment and management guidelines. Can Comm Dis Rep 2016;42:12-19. https://doi.org/10.14745/ccdr.v42i01a03. Accessed Dec 13, 2021
2. Graphic from www.ecdc.europa.eu/en. Accessed Dec 22, 2021