CORONAVIRUS DISEASE 2019 (COVID-19)

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Coronaviruses are important human and animal pathogens. At the end of 2019, a novel coronavirus was identified as the cause of a cluster of pneumonia cases in Wuhan, a city in the Hubei Province of China. It rapidly spread, resulting in an epidemic throughout China, with sporadic cases reported globally. In February 2020, the World Health Organization designated the disease COVID-19, which stands for coronavirus disease 2019[1].

The virus that causes COVID-19 is designated severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); previously, it was referred to as 2019-nCoV. Increasing numbers of cases have also been reported in other countries across all continents except Antarctica, and the rate of new cases outside of China has outpaced the rate in China. These cases initially occurred mainly among travelers from China and those who have had contact with travelers from China[2-3].

Understanding of the transmission risk is incomplete. Epidemiologic investigation in Wuhan at the beginning of the outbreak identified an initial association with a seafood market that sold live animals, where most patients had worked or visited and which was subsequently closed for disinfection.

The incubation period for COVID-19 is thought to be within 14 days following exposure, with most cases occurring approximately five days after exposure.

Pneumonia appears to be the most frequent serious manifestation of infection, characterized primarily by fever, cough, dyspnea, and bilateral infiltrates on chest imaging[4].

According to the WHO, recovery time appears to be around two weeks for mild infections and three to six weeks for severe disease.

Chest computed tomography (CT) in patients with COVID-19 most commonly demonstrates ground-glass opacification with or without consolidative abnormalities, consistent with viral pneumonia[5,6]. Case series have suggested that chest CT abnormalities are more likely to be bilateral, have a peripheral distribution, and involve the lower lobes. Less common findings include pleural thickening, pleural effusion, and lymphadenopathy.

At present, the possibility of COVID-19 should be considered primarily in patients with fever and/or lower respiratory tract symptoms who:

- Reside in or have recently (within the prior 14 days) traveled to areas where community transmission has been reported) **or**
- Have had recent (within the prior 14 days) close contact with a confirmed or suspected case of COVID-19, including through work in health care settings. Close contact includes being within approximately six feet of a patient for a prolonged period of time while not wearing personal protective equipment or having direct contact with infectious secretions while not wearing personal protective equipment.

Test for SARS-CoV-2 from the upper respiratory tract (nasopharyngeal and oropharyngeal swab) and, if possible, the lower respiratory tract (sputum, tracheal aspirate, or bronchoalveolar lavage[6].

Management of patients with suspected or documented COVID-19 consists of ensuring appropriate infection control, and supportive care. Supportive care for sepsis and acute respiratory distress syndrome should be given.

Home management may be appropriate for patients with mild infection who can be adequately isolated in the outpatient setting. Management of such patients should focus on prevention of transmission to others, and monitoring for clinical deterioration, which should prompt hospitalization. Outpatients with COVID-19 should stay at home and try to separate themselves from other people and animals in the household. They should wear a facemask when in the same room (or vehicle) as other people and when presenting to health care settings.

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The decision to discontinue infection control precautions for patients with COVID-19 should be made on a case-by-case basis in consultation with experts in infection prevention and control and public health officials.

Factors to inform this decision include resolution of clinical signs and symptoms and negative results of reverse-transcription polymerase chain reaction (RT-PCR) testing for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) on two sequential paired nasopharyngeal and throat specimens (ie, four specimens total, each handled separately), with each pair collected =24 hours apart[11].

The following general measures are recommended to reduce transmission of infection:
Diligent hand washing.
Respiratory hygiene (eg, covering the cough or sneeze).
Avoiding touching the face (in particular eyes, nose, and mouth).
Avoiding close contact with ill individuals.

REFERENCES:

1. World Health Organization. Director-General's remarks at the media briefing on 2019-nCoV on 11 February2020.https://www.who.int/dg/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-2019-ncov-on-11-february-2020.
2. Centers for Disease Control and Prevention. 2019 Novel Coronavirus (2019-nCoV) in the US. https://www.cdc.gov/coronavirus/2019-ncov/cases-in-us.html
3. World Health Organization. Novel coronavirus situation report -2. January 22, 2020. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200122-sitrep-2-2019-ncov.pdf
4.. WHO Director-General's opening remarks at the media briefing on COVID-19 - 24 February 2020 https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---24-february-2020 .
5.. Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Persons Under Investigation (PUIs) for Coronavirus Disease 2019 (COVID-19). February 14, 2020 https://www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html
6. Centers for Disease Control and Prevention. Interim Considerations for Disposition of Hospitalized Patients with 2019-nCoV Infection. https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.html .