Review Article

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Clinical Manifestation, Controlling, and Prevention Methods of Corona Virus Disease (COVID-19)

Sebona Diriba[1] and Lelisa Diriba[2]

[1]*School of Medicine and Public Health Science, Metu University, Metu, Ethiopia.*

[2]*Oromia Agricultural Research Institute, Adami Tulu Agricultural Research Center, Batu, Ethiopia.*

***Corresponding author**
Lelisa Diriba, Oromia Agricultural Research Institute, Adami Tulu Agricultural Research Center, Batu, Ethiopia.

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Abstract

This material review was aims to provide the evidence of early findings on the causes and clinical diagnosis, as well as prevention and control methods of COVID-19. The corona virus disease (COVID-19) has been identified as the cause of an outbreak of respiratory illness in Wuhan, Hubei Province, China beginning in December 2019. The first infections were linked to a live animal market, but the virus is now spreading from person-to-person. The virus that causes COVID-19 seems to be spreading easily and sustainably in the community ("community spread") in some affected geographic areas. Complete clinical manifestation is not clear yet. However, the most commonly reported symptoms are fever, cough, myalgia or fatigue, pneumonia, and complicated dyspnea, whereas less common reported symptoms include headache, diarrhea, hemoptysis, runny nose, and phlegmproducing cough. The growth rate of new cases and deaths of COVID-19 were significantly faster in the worldwide. Currently there is no evidence to support transmission of COVID-19 associated with food. Before preparing or eating food, it was important to wash always your hands with soap and water for 20 seconds for general food safety. Throughout the day, avoiding close contact, washing our hands by soap after blowing your nose and coughing or sneezing, or going to the bathroom were the way to reduce or control the spread of this virus. If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60% alcohol. Training public health professionals and communities, and establishing the disease information system covering the whole country, the establishment of a complete reporting system for infectious diseases and an excellent mechanism for handling public health emergencies were a crucial.

Keywords: : *Covid-19, virus, prevention, cause.*

Introduction and Background

The coronavirus belongs to a family of viruses that may cause various symptoms such as pneumonia, fever, breathing difficulty, and lung infection [1]. Some cause illness in people, and others, such as canine and feline coronaviruses, only infects animals. Rarely, animal coronaviruses that infect animals have emerged to infect people and can spread between people [2]. This is suspected to have occurred for the virus that causes COVID-19. Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) are two other examples of coronaviruses that originated from animals and then spread to people. More information about the source and spread of COVID-19 is available on the Situation Summary: Source and Spread of the Virus). Initially this virus is named as 2019 novel coronavirus (2019-nCoV); the virus has now been named SARS-CoV-2 by the International Committee of Taxonomy of Viruses (ICTV) [3]. This virus can cause the disease named coronavirus disease 2019 (COVID-19) [7].

In late 2019, an acute respiratory disease emerged, known as novel coronavirus disease 2019 (COVID-19) [4]. The pathogen responsible for COVID-19 is severe acute respiratory syndrome corona virus 2 (SARS-CoV-2, also referred to as the COVID-19 virus), a member of the coronavirus family. In response to the growing spread of COVID-19, [5] has published a number of technical guidance documents on specific topics, including infection prevention and control (IPC). These documents are available at https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/infection-prevention-and-control.

This coronavirus disease (COVID-19) has been identified as the cause of an outbreak of respiratory illness in Wuhan, Hubei Province, China beginning in December 2019. As of 31 January 2020, this epidemic had spread to all over the world in short period of time [6]. The latest guidelines from Chinese health authorities stated an average incubation duration of 7 days, ranging from 2 to 14 days [7].

This review aims to provide the evidence of early findings on the epidemiology, causes, clinical diagnosis, as well as prevention and control of COVID-19 in relation to time, location, and source of publication. This review can provide meaningful information for future research related to this topic and may support government decision making on strategies to handle this public health emergency at the community, national, and international levels.

Methods and Study Design

A scoping review was conducted following the methodological framework suggested by Arksey and O'Malley [8]. The following five steps were followed to conduct this scoping review: a) identifying a clear research objective and search strategies, b) identifying relevant research articles, c) selection of research articles, d) extraction and charting of data, and e) summarizing, discussing, analyzing, and reporting the results.

Results and Discussion

Epidemiology

On 29 December 2019, the first four cases of an acute respiratory syndrome of unknown etiology were reported in Wuhan City, Hubei Province, China among people linked to a local seafood market ("wet market") [9]. Research is underway to understand more about transmissibility, severity, and other features associated with COVID-19 [2, 10].

Clinical manifestation and diagnosis

The complete clinical manifestation is not clear yet, as the reported symptoms range from mild to severe, with some cases even resulting in death [10]. The most commonly reported symptoms are fever, cough, myalgia or fatigue, pneumonia, and complicated dyspnea, whereas less common reported symptoms include headache, diarrhea, hemoptysis, runny nose, and phlegmproducing cough [10, 11]. Patients with mild symptoms were reported to recover after 1 week while severe cases were reported to experience progressive respiratory failure due to alveolar damage from the virus, which may lead to death [12]. CDC has developed guidance to help in the risk assessment and management of people with potential exposures to COVID-19. If some person gets sick with COVID-19, he/she will able to recover at home. CDC has directions for people who are recovering at home and their caregivers, including; stay home when you are sick, except to get medical care.

Prevention and control methods

Steps that every person takes to reduce our risk of getting COVID-19 (6) were;

- Avoid close contact with people who are sick.
- Stay home when you are sick, except to get medical care.
- Cover your coughs and sneezes with a tissue and throw the tissue in the trash.
- Wash your hands often with soap and water for at least 20 seconds, especially after blowing your nose, coughing, or sneezing; going to the bathroom; and before eating or preparing food.
- If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60% alcohol. Always wash hands with soap and water if hands are visibly dirty.
- Clean and disinfect frequently

Summary and recommendation

This study shows a holistic picture of the current research in response to the outbreak of COVID-19. During this early period, many studies have been published exploring the epidemiology, causes, clinical manifestation and diagnosis, and prevention and control of the novel coronavirus. Thus far, most studies have focused on the epidemiology and potential causes. However, studies exploring prevention and control measures have begun to gradually low. Studies in this domain are urgently needed to minimize the impact of the outbreak. Government agencies have quickly incorporated recent scientific findings into public policies at the community, regional, and national levels to slow down and/or prevent the further spread of the COVID-19. If he/she develops emergency warning signs for COVID-19, get medical attention immediately. This emergency warning signs include; trouble breathing, persistent pain or pressure in the chest, new confusion or inability to arouse and bluish lips or face.

The medical attentions that any sick person must know were as follows;

- Use a separate room and bathroom for sick household members (if possible).
- Clean hands regularly by hand washing with soap and water or using an alcohol-based hand sanitizer with at least 60% alcohol.
- Provide your sick household member with clean disposable facemasks to wear at home, if available, to help prevent spreading COVID-19 to others.
- Clean the sick room and bathroom, as needed, to avoid unnecessary contact with the sick person.
- Avoid sharing personal items like utensils, food, and drinks.
- This list is not all-inclusive. Please consult your medical provider for any other symptoms that are severe or concerning.

Recommendation

We recommend that the scholarly community conduct further research to provide valid and reliable ways to manage this kind of public health emergency in both the short term and long-term.

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