



A Novel Coronavirus (COVID-19) Pathogen is Global Challenge for Public Health

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Abstract

A novel coronavirus strain (COVID-19) identified in the human airway epithelial cells in China. It is a new strain of the coronavirus which severely cause infections in the human beings and have different characterization from both MERS-CoV and SARS-CoV strains. However, the COVID-19 infection caused clusters of severe respiratory illness. A common sign of infection include respiratory diseases with pneumonia and serious condition might be caused death. Coronavirus (COVID-19) infection spread by human animal interactions. Increasing death toll due to a novel coronavirus might be seemed has the potential to become a worldwide pandemic. Coronavirus (COVID-19) outbreaks in China have become a global challenge for public health. Furthermore, research work is needed to open the mystery of COVID-19 corona virus at genetic level.

Keywords: COVID-19; Human-animal interactions; Respiratory diseases; Pneumonia; Death

Introduction

Coronaviruses (Covid-19) are positive single-stranded RNA viruses, contain large RNA genome and a unique replication strategy belonging to the family *Coronaviridae* and the order *Nidovirales* [1,2]. Coronaviruses cause a variety of syndromes in mammals, birds including humans [1,3]. They cause the respiratory, enteric, hepatic, and neurologic diseases [4,5]. Total six types of corona viruses severely cause infections in human beings such as Type-1 (229E), Type-2 (OC43), Type-3 (NL63), and type-4 (HKU1) are prevalent and typically cause common cold in immune competent individuals [3]. The two other strains cause respiratory diseases in humans specifically, Type-5 (SARS-CoV) Severe Acute Respiratory Syndrome (SARS), and Type-6 (MERS-CoV) Middle East Respiratory Syndrome. However, Type-7 (COVID-19) has been recently recognized in China outbreaks [3]. Coronavirus strains (COVID-19) severely cause infections in human beings [3]. Various previous studies have been reported about the different strains of the corona virus such as a highly acknowledged the pathogens SARS-CoV and MERS-CoV. Masters et al. [5] reported the genome of a Severe Acute Respiratory Syndrome (SARS). The outbreak of coronaviruses also reported in past as in China Severe Acute Respiratory Syndrome (SARS-CoV) outbreaks during 2002 and 2003 in Guangdong Province [6]. Zaki et al. [7] reported the outbreak of MERS-CoV coronavirus in the Middle East. Zhu et al. [3] reported the outbreak of coronavirus and affections in the humans spread by human-animal interface activities during in December 2019 Hubei province and Wuhan city of China. The snake could be the source of a new novel coronavirus but still the origin is verified [8]. Zhou et al. [9] reported coronavirus of probably bat origin. However, coronaviruses in china investigated in patients infected by respiratory diseases with pneumonia (Municipal, Health Center, China 2019) [10].

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Symptoms

Common signs of coronavirus (COVID-19) infection include respiratory symptoms, fever, and cough, shortness of breath and breathing difficulties. In more severe cases, the infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death (WHO, 2020). These symptoms are conformity with the reports [3,8-11]. For examples, Wu et al. [11] reported that coronavirus (COVID-19) associated with respiratory diseases in humans. Pan et al. [10] noted the chest and pneumonia in human. Zhou et al. [9] explained new outbreak of pneumonia in China reason behind the coronavirus infection. Zhu et al. [3] observed respiratory infections with pneumonia in patients of China and found COVID-19 a new strain of the coronavirus in humans.

Coronavirus Affected Countries

According to the WHO report across the world, fifty-four countries affected by a novel strain of

Table 1: Confirmed death toll (WHO, 2020) Dated February 28, 2020.

Countries	Deaths
China	2,794
Iran	26
Italy	17
South Korea	13
Japan	4
France	2
Philippines	1
Taiwan	1

COVID-19 coronavirus. Some major countries include China, Hong Kong, Italy, Iran, South Korea, Japan, France, Philippines and Taiwan (WHO, 2020) has been given (Table 1). However, coronavirus spread more quickly in the world due to travelling from one area to other areas [12-15]. Some coronavirus cases are also reported in Pakistan, India and Afghanistan mostly in students. As Pakistan government confirmed two affected person (Dated: 27 February 2020) one in Karachi City and other belongs to Islamabad, Capital of Pakistan (Pak, 2020). The world worried about the outbreaks of a novel coronavirus because infections among people are always public health concerns. However, coronavirus COVID-19 outbreaks have become a global challenge for public health.

Conclusion

Human-animal activities are responsible for coronavirus in humans. The 2019-nCoV recognized as 7th type of coronavirus in China. More death tolls found in China city Wuhan. Further, need to epidemiological analysis of the coronavirus disease and increase situational awareness, information and interventions. As the outbreak of coronavirus disease 2019 (COVID-19) is rapidly expanding in China and beyond, with the potential to become a worldwide pandemic.

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