

TITLE PAGE

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Outbreak of 21st Century**

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Novel coronavirus (2019-nCoV): Update on 3rd Coronavirus Outbreak of 21st Century

Dear Editor,

We read with great interest the recent article by Fang et al on novel coronavirus infection (2019-nCoV) published in February issue (1). It was in early December 2019, when the 1st case of Coronavirus disease-2019 (COVID-2019) was detected in a patient who was admitted for pneumonia of unknown etiology (**Figure 1**). We would like to mention a few additional comments about this deadly virus which has been a matter of health concern worldwide.

2019-nCoV has been found to be epidemiologically linked to the Huanan seafood wholesale market in Wuhan, China which is known for selling exotic animals (2). While, the exact host is yet to be determined, but based on the genomic studies done till now it has been postulated that possibly bats may be one of the suspected hosts responsible for transmitting this virus to humans (2). This is not the first time when human life is in danger because of such outbreaks. Previously as well, Severe acute respiratory syndrome-related coronavirus (SARS-CoV) outbreak (2003) and Middle East respiratory syndrome coronavirus (MERS-CoV) outbreak (2012) resulted in many deaths worldwide (3). Despite this, the exposure to the exotic animals knowingly or unknowingly continued thereby resulting in the ongoing 3rd Coronavirus outbreak of the 21st century.

Up till 22nd Jan 2020, 77917 cases of 2019-nCoV infection have been reported worldwide, the majority from China (76291 cases) with 2361 patients losing their life as shown in **Table 1** (4,5). As compared to China, in the rest of the world, the number of cases proportionately remains low (**Figure 2**). Both the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) are regularly issuing the latest updates and guidelines on 2019-nCoV infection (4). It is important to note that, out of all the 3 coronavirus outbreaks of the 21st century,

COVID-2019 has caused the maximum number of deaths till now and the count is still rising. However, when compared to the MERS outbreak (mortality rate of 35-40%) and SARS outbreak (mortality rate of 9-10%), the mortality rate of 2019- nCoV is significantly lower (1-3%). The possible reason postulated is the excessive cytokine release with MERS and SARS as compared to 2019-nCoV infection, however, this needs to be confirmed in further studies (6-7).

With regards to the identification, health care professionals should be aware of the diagnostic criteria laid down by WHO to evaluate any suspected case. Hence, detailed travel and sick contact history are of utmost importance to ensure that any suspect gets thoroughly evaluation to rule out 2019-nCoV infection. With regards to symptomatology, it has been reported that fever, fatigue, and dry cough are the three most common reported symptoms related to 2019-nCoV (8,9). Interesting to note that as compared to previous coronavirus outbreaks, diarrhea is rarely reported with 2019- nCoV infection (8-10).

Fang et al did mention about the radiological findings in their patient (1). The study by Wang et al on 138 hospitalized patients with COVID-2019 showed that 100% of the patients had positive radiological findings. The most common reported pattern seen in chest computed tomographic scans were bilateral patchy shadows or ground-glass opacities (9). The study also showed that comorbidities like hypertension, diabetes, and cardiovascular disorders increased the likelihood of complications requiring intensive care. Based on similar studies and our experience, we believe that immunocompromised individuals like patients with active cancer, HIV, patients on steroids etc. hold a higher risk of having complications if they acquire viral infections like COVID-2019 (11-14).

Fang et al gave Veletonavir to their patient as the antiviral agent of choice (1). We would like to emphasize that none of the antiviral agents available at this time has been proven to be effective to treat COVID-2019. Many drugs like Darunavir/Cobicistat and Lopinavir/Ritonavir are under trial to study their efficacy against 2019-nCoV (15).

In conclusion, the current situation with regards to the 2019-nCoV outbreak is alarming as the number of cases is increasing day by day. At an individual level, every attempt should be made to follow all the civic responsibilities and mannerism in order to prevent the spread of this infection.

LEGENDS

Figure 1. Timeline showing the index case detection in China and worldwide.

Table 1. Total no of positive cases detected worldwide as per John Hopkins University Center for Systems Science and Engineering website (*Data Updated till 02/22/2020*).

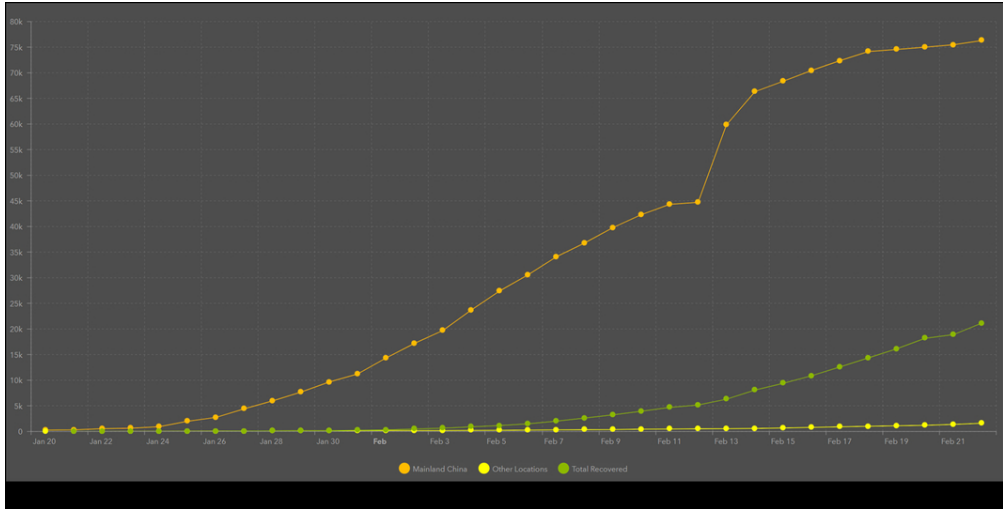
Figure 2. Trend showing total number of conformed cases in China (*orange line*), worldwide (*yellow lone*) and recovered cases (*green line*) as per John Hopkins University Center for Systems Science and Engineering website (*Data Updated till 02/22/2020*).

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S. N	COUNTRY	NO OF CONFIRMED CASES
1	Mainland China	76,291
2	Others	634
3	South Korea	433
4	Japan	119
5	Singapore	85
6	Hong Kong	68
7	Thailand	35
8	US	35
9	Iran	28
10	Taiwan	26
11	Malaysia	22
12	Italy	20
13	Australia	19
14	Germany	16
15	Vietnam	16
16	France	12
17	United Arab Emirates	11
18	Macau	10
19	Canada	9
20	UK	9
21	Philippines	3
22	India	3
23	Russia	2
24	Spain	2
25	Lebanon	1
26	Nepal	1
27	Cambodia	1
28	Israel	1
29	Belgium	1
30	Finland	1
31	Sweden	1
32	Egypt	1
33	Sri Lanka	1