International Journal of Scientific Research in Science and Technology
Print ISSN: 2395-6011 | Online ISSN: 2395-602X (www.ijsrst.com)
doi : https://doi.org/10.32628/IJSRST20761

COVID-19 Prevention and Management : Overview

Dr. P. Srilatha Reddy
Former Research Scholar, Institute of Science and Technology, Jawaharlal Nehru Technological University Hyderabad, Kukatpally, Hyderabad, Telangana, India

Article Info
Volume 7, Issue 6
Page Number: 23-32
Publication Issue :
November-December-2020

ABSTRACT

COVID-19 was originated from Wuhan city of Hubei Province in China in December 2019. Since then it has spread to more than 216 countries and territories. It is a contagious respiratory and vascular disease due to the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) a specific type of coronavirus. The patients show common symptoms like cough, sore throat, fever, breathing problems, and loss of smell and taste. The disease due to SARS-CoV-2 was named COVID-19. COVID-19 mainly spreads through the air when people are near each other, primarily via small droplets or aerosols, as an infected person breathe, coughs, sneezes and speaks. About 46.8 million people have been infected with more than 1.2 million deaths globally. The United States of America is the most affected country with the highest patients of about 9.47million.

In spite of immense efforts, there is no treatment of this disease. However, prevention and management are the best options. This article describes SARS-CoV-2, disease, symptoms, transmission, diagnosis, prevention and management. It is immediately advised and requested that all humankind should follow the precautionary measures and managements to stop Coronavirus spread otherwise the condition may be worsen. In particular, we focus on proper prevention and management is essential to combat this disease and there is a vital prerequisite to educate our novel generation for science and technology to fight against the COVID-19, this overview represents a picture of the current state of the art. It may be useful to create awareness among the community to prevent and manage COVID-19.

Article History
Accepted : 01 Nov 2020
Published : 07 Nov 2020

Keywords : Coronavirus, COVID-19, Prevention and Management, Contagious Respiratory, Vascular Disease, Severe Acute Respiratory Syndrome Coronavirus

I. INTRODUCTION

The virus is thought to be natural and has an animal origin,[1] through spillover infection.[2] The first known human infections were in Wuhan, Hubei, China. A study of the first 41 cases of confirmed COVID-19, published in January 2020 in *The Lancet*, reported the earliest date of onset of symptoms as 1 December 2019.[3][4][5] Official publications from the WHO reported the earliest onset of symptoms as 8 December 2019.[6] Human-to-human transmission was confirmed by the WHO and Chinese authorities by 20 January 2020.[7][8] [60]

During the early stages of the outbreak, the number of cases doubled approximately every seven and a half days.[9] In early and mid-January 2020, the virus spread to other Chinese provinces, helped by the Chinese New Year migration, and Wuhan being a transport hub and major rail interchange.[10] On 20 January, China reported nearly 140 new cases in one day, including two people in Beijing and one in Shenzhen.[11] Later official data shows 6,174 people had already developed symptoms by then,[12] and more may have been infected.[13] A report in *The Lancet* on 24 January indicated human transmission, strongly recommended personal protective equipment for health workers, and said testing for the virus was essential due to its "pandemic potential".[14][15] On 30 January, the WHO declared the coronavirus a Public Health Emergency of International Concern.[16] By this time, the outbreak spread by a factor of 100 to 200 times.[17]

The Coronaviruses are named for the crown-like spikes on their surface. There are four main sub-groupings of coronaviruses, known as alpha, beta, gamma, and delta. [18]There are four main sub groupings of CoVs: (I) α-coronavirus (alphaCoV), (II) β-coronavirus (betaCoV) probably present in bats and rodents, while (III) δ-coronavirus (deltaCoV), and (IV) γ-coronavirus (gammaCoV) probably represent avian species. [19][20][21] [88]The virus has a natural and zoonotic origin: two scenarios that can plausibly explain the origin of SARS-CoV2 are: (i) natural selection in an animal host before zoonotic transfer; and (ii) natural selection in humans following zoonotic transfer.[20][21] [88]Clinical features and risk factors are highly variable, making the clinical severity range from asymptomatic to fatal. [22] Understanding of COVID-19 is on-going. [86]

This virus is out broken in pneumonia type of disease with respiratory problems, leading to death due to respiratory failure. About 216 countries and territories have been reported to be infected with major outbreaks in the USA, India, Brazil, Russia, France, and Spain etc. About 46.8 million people have been infected with more than 1.2 million deaths globally.The United States of America is the most affected country with the highest patients of about 9.47 million and about 2,36,000 deaths. This review aims to overview on the disease and symptoms, transmission, diagnosis, prevention and management of COVID-19. [87] [88]

1.1 Disease and Symptoms

Signs and Symptoms of COVID-19 can change, but have fever and a cough in common.[23][24] People with the same infection may have various symptoms, and their symptoms may change over a period of time. For instance, one person may have a high fever, a cough, and fatigue, and another person may have a low fever at the start of the disease and develop difficulty breathing a week later. However, for people those without prior ears, nose, and throat (ENT) disorders, also with loss of taste combined with loss of smell is associated with COVID-19 with a specificity of 95%.[25] Some symptoms of COVID-19 can be comparatively non-specific; the most common symptoms are fever (88%) and dry

cough (68%).[26][27] Among those who develop symptoms, approximately one in every five people may become more seriously ill and have difficulty breathing. An emergency symptom includes trouble with breathing, persistent chest pain or pressure, sudden confusion and bluish face or lips; immediate medical attention is advised if these symptoms are found to be present.[27] Further development of the disease can lead to complications such as pneumonia, acute respiratory distress syndrome, sepsis, septic shock, and kidney failure.

As there are common infections, there is a delay, known as the incubation period, between the moment a person first becomes infected and the appearance of the first symptoms. The median incubation period for COVID-19 is four to five days.[28] Most symptomatic people experience symptoms within two to seven days after exposure, and almost all symptomatic people will experience one or more symptoms before day twelve.[28][29] [60]

II. Modes of Transmission

COVID-19 spreads from one person to other person mainly through the respiratory route after an infected person comes in contact when he coughs, sneezes, sings, talks or breathes.[30] A new infection generally occurs when virus-containing particles exhaled by an infected person, either respiratory droplets or aerosols, get into the mouth, nose, or eyes of other people who are in close contact with the infected person.[31][32][33] Respiratory droplets may evaporate into droplet nuclei, which remain suspended in the air for longer periods of time,[34][35][36] causing airborne transmission particularly in crowded and inadequately ventilated indoor spaces, such as restaurants, nightclubs or choirs.[37][38] It also can occur in the healthcare setting, with certain aerosol-generating medical procedures performed on COVID-19 patients.[34][37]

Kissing, physical intimacy and some other forms of direct contact can easily transmit the virus and lead to COVID-19 in people exposed to such contact.[37][38] It may be possible that a person can get COVID-19 through indirect contact by touching a contaminated surface or object, and then touching their own mouth, nose, or possibly their eyes,[37] though this is not thought to be the main way the virus spreads.[32] There currently is no significant evidence of COVID-19 virus transmission through, breast milk, food, wastewater, drinking water, animal disease vectors, or from mother to baby during pregnancy, although research is ongoing and caution is advised.[37][38]

The number of people normally infected by one infected person varies;[39] as of September 2020 it is estimated that one infected person on an average will infect between two to three other people.[40] It is more infectious than influenza, but less so than measles.[41] It often spreads in clusters, where infections can be traced back to an index case or geographical location.[42] There is a major role of "super-spreading events", where many people are infected by one person.[39]

It can transmit when people are symptomatic, also for up to two days prior to developing symptoms, and even if a person never shows symptoms.[32][40] People remain infectious in moderate cases for 7-12 days, and up to two weeks in severe cases.[40] In October 2020, medical scientists reported evidence of reinfection in one patient.[43][44]

III. Diagnosis

The standard method of testing is real-time reverse transcription polymerase chain reaction (RT-PCR).[45] The test is typically done on respiratory samples obtained by a nasopharyngeal swab; however, a nasal swab or sputum sample may also be

used.[46][47] Results are generally available within a few hours to two days.[48][49]Blood tests can be used, but these require two blood samples taken two weeks apart, and the results have little immediate value.[50]

The antibody tests (which may detect active infections and whether a person had been infected in the past) were in development, but not yet widely used.[51][51][53] Antibody tests may be most accurate after 2–3 weeks a person's symptoms start.[54] A study asked hospitalised COVID-19 patients to cough into a sterile container, thus producing a saliva sample, and detected the virus in eleven of twelve patients using RT-PCR. The technique used has ability of giving quicker results than a swab and has less risk to health care workers (collection at home or in the car).[55]Along with laboratory testing, CT scans are also helpful to diagnose COVID-19 in an individual with a high clinical suspicion of infection but are not recommended for routine screening.[56] [57] Bilateral multilobar ground-glass opacities with a peripheral, asymmetric, and posterior distribution are usually common in early infection.[57][58] Subpleural dominance, crazy paving (lobular septal thickening with variable alveolar filling), and consolidation may appear as the disease progresses.[56][59] [60]

IV. Prevention and Management

4.1. Prevention

Prevention is the best practice right now in order to reduce the impact of COVID-19 considering the lack of effective treatment. There is no vaccine currently to protect against COVID-19.The best Preventive measures to reduce the chances of infection include staying at home, wearing a mask in the people, avoiding crowded places, keeping atleast 6 feet distance from others, washing hands with soap and water often and for at least 20 seconds, practising good respiratory hygiene, and avoiding touching the eyes, nose, or mouth with unwashed hands.[61][62][63][64][60] Those who diagnosed with COVID-19 or suspect they may be infected are advised by the CDC (Centers for Disease Control and Prevention) to stay home except to get medical care, call in advance before visiting a healthcare provider, wear a face mask before entering the healthcare provider's office and when in any room or vehicle with another person, cover coughs and sneezes with a tissue, regularly wash hands with soap and water and avoid sharing personal household items. [65][66]

4.1.1. Personal protective equipment

For health care professionals who may come into contact with COVID-19 positive bodily fluids, using personal protective coverings on exposed body parts improve protection from the virus. In addition to that, adding tabs and some form of other modifications to the protective equipment may reduce the risk of contamination during donning and doffing (putting on and taking off the equipment). Implementing an evidence-based donning and doffing protocol such as a one-step glove and gown removal technique, giving oral instructions while donning and doffing, double gloving, and the use of glove disinfection may also improve protection for health care professionals.[67][60]

4.1.2. Face Masks

The World Health Organization (WHO) and most of the countries recommended public to wear non-medical face coverings in public settings where there is an increased risk of transmission and where social distancing measures are difficult to maintain. [60][68][69] [70][71][72] This recommendation is meant to reduce the spread of the disease by asymptomatic and pre-symptomatic individuals and is complementary to established preventive measures such as social distancing. Face coverings limit the volume and travel distance of expiratory droplets dispersed when

talking, breathing, and coughing.[70] Masks are also strongly recommended for those who may have been infected and those taking care of someone who may have the disease.[73]

4.1.3. Social distancing

The main aim of Social distancing strategies are to reduce contact of infected persons with large groups by closing schools and workplaces, restricting travel, and canceling large public gatherings.[74] Distancing guidelines also include that people stay at least 2 meters (6.6 ft) apart.[5] After the 7 of social distancing and stay-at-home orders, many regions have been able to sustain an effective transmission rate ("R_t") of less than one, meaning the disease is in remission in those areas. [60][76]

4.1.4. Hand-washing and hygiene

Always proper hand hygiene after any cough or sneeze is encouraged.[77][78] The WHO also recommends that individuals wash hands often with soap and water for at least 20 seconds, especially after going to toilet or when hands are dirty, before eating or after blowing one's nose. The CDC recommends using an alcohol-based hand sanitizer with at least 60% alcohol, but only when soap and water are not readily available.[78] For areas where commercial hand sanitizers are not readily available, the WHO provides two formulations for local production. In these formulations, the antimicrobial activity arises from ethanol or isopropanol. Hydrogen peroxide is used to help eliminate bacterial spores in the alcohol; it is "not an active substance for hand antisepsis". Glycerol is added as a humectant.[79]Sanitizing of frequently touched surfaces is also recommended. [60]

4.2. Management

There is no specific antiviral treatment recommended for COVID-19, and no vaccine is currently available as of now. [87] Different strategies can be used depending on the severity of the patient. Residence managing is suitable for asymptomatic patients. They need everyday mandatory assessment of body temperature, blood pressure, oxygen saturation and respiratory symptoms for about two weeks. Such kind of patients should focus on prevention of transmission to others and monitoring for clinical status with prompt hospitalization if required. Outpatients with COVID-19 should stay at home and try to separate themselves from other people in the household. They should wear a face mask when in the same room (or vehicle) as other people. When presenting to health care settings. Cleaning and disinfection of frequently touched surfaces is also important. The optimal duration of home isolation is uncertain, but in consideration of incubation time around 14 days without symptoms (fever, breathing problems, others) are considered sufficient to end home isolation. [88]

People are managed with supportive care, which may include fluid therapy, oxygen support, and supporting other affected vital organs.[80][81][82] The CDC recommends those who suspect they carry the virus wear a simple face mask. Extracorporeal membrane oxygenation (ECMO) has been used to find out the issue of respiratory failure, but its benefits are still under consideration.[83] Personal hygiene and a healthy diet have been recommended to improve immunity.[84] Supportive treatments may be useful in those with mild symptoms at the early stage of infection.[85] [60]

V. CONCLUSION

This article provides an insight into the COVID-19 present situation and represents a picture of the

current state of art in terms of public Health impact, disease, symptoms, transmission, diagnosis, prevention and management. There are rapid clinical trials are going on the COVID-19 vaccine and hopefully, it will help in finding an effective stop for the virus spread, prevention and management. Once this pandemic ends, everyone will be able to evaluate their health, socializing with other people and economic impacts of this global disaster and we should be able to learn from our experiences, especially in terms of public and global health for future pandemics.

VI. REFERENCES

1. Andersen KG, Rambaut A, Lipkin WI, Holmes EC, Garry RF (April 2020). "The proximal origin of SARS-CoV-2". Nature Medicine. 26 (4): 450–452. doi:10.1038/s41591-020-0820-9. PMC 7095063. PMID 32284615
2. Berger K (12 March 2020). "The Man Who Saw the Pandemic Coming". Nautilus. Archived from the original on 15 March 2020. Retrieved 16 March 2020.
3. Wu YC, Chen CS, Chan YJ (March 2020). "The outbreak of COVID-19: An overview". Journal of the Chinese Medical Association. 83 (3): 217–220. doi:10.1097/JCMA.0000000000000270. PMC 7153464. PMID 32134861.
4. Wang C, Horby PW, Hayden FG, Gao GF (February 2020). "A novel coronavirus outbreak of global health concern". Lancet. 395 (10223): 470–473. doi:10.1016/S0140-6736(20)30185-9. PMC 7135038. PMID 31986257.
5. Cohen J (January 2020). "Wuhan seafood market may not be source of novel virus spreading globally". Science. doi:10.1126/science.abb0611.
6. "Novel Coronavirus – China". World Health Organization (WHO). 12 January 2020.
7. Kessler G (17 April 2020). "Trump's false claim that the WHO said the coronavirus was 'not communicable'". The Washington Post. Archived from the original on 17 April 2020. Retrieved 17 April 2020.
8. Kuo L (21 January 2020). "China confirms human-to-human transmission of coronavirus". The Guardian. Retrieved 18 April 2020.
9. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. (March 2020). "Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia". New England Journal of Medicine. 382 (13): 1199–1207. doi:10.1056/NEJMoa2001316. PMC 7121484. PMID 31995857.
10. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19) (PDF) (Report). World Health Organization (WHO). 24 February 2020. Archived (PDF) from the original on 29 February 2020. Retrieved 21 March2020.
11. China confirms sharp rise in cases of SARS-like virus across the country". 20 January 2020. Archived from the original on 20 January 2020. Retrieved 20 January 2020
12. The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team (17 February 2020). "The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) – China, 2020". China CDC Weekly. 2 (8): 113–122. doi:10.46234/ccdcw2020.032. Retrieved 18 March 2020.
13. Jump up to:[a] [b] "Flattery and foot dragging: China's influence over the WHO under scrutiny". The Globe and Mail. 25 April 2020
14. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. (24 January 2020). "Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China". Lancet. 395 (10223): 497–

506. doi:10.1016/S0140-6736(20)30183-5. PMC 7159299. PMID 31986264.

15. Horton, Richard (18 March 2020). "Scientists have been sounding the alarm on coronavirus for months. Why did Britain fail to act?". The Guardian. Retrieved 23 April 2020
16. Jump up to:[a] [b] "Flattery and foot dragging: China's influence over the WHO under scrutiny". The Globe and Mail. 25 April 2020.
17. China delayed releasing coronavirus info, frustrating WHO". AP NEWS. 2 June 2020. Retrieved 3 June 2020
18. U.S. Centers for Disease Control and Prevention (CDC).Coronavirus types.
19. Perlman, S.; Netland, J. Coronaviruses post-SARS: Update on replication and pathogenesis. Nat. Rev. Microbiol. 2009, 7, 439–450. [Google Scholar] [CrossRef] [PubMed]
20. Lu, R.; Zhao, X.; Li, J.; Niu, P.; Yang, B.; Wu, H.; Wang, W.; Song, H.; Huang, B.; Zhu, N.; et al. Genomic characterisation and epidemiology of 2019 novel coronavirus: Implications for virus origins and receptor binding. Lancet 2020, 395, 565–574. [Google Scholar] [CrossRef]
21. Yin, Y.; Wunderink, R.G. MERS, SARS and other coronaviruses as causes of pneumonia. Respirology 2018, 23, 130–137. [Google Scholar] [CrossRef]
22. Phan, T. Novel coronavirus: From discovery to clinical diagnostics. Infect. Genet. Evol. 2020, 79. [Google Scholar] [CrossRef]
23. Grant MC, Geoghegan L, Arbyn M, Mohammed Z, McGuinness L, Clarke EL, Wade RG (23 June 2020). "The prevalence of symptoms in 24,410 adults infected by the novel coronavirus (SARS-CoV-2; COVID-19): A systematic review and meta-analysis of 148 studies from 9 countries". PLOS ONE. 15 (6): e0234765. Bibcode:2020PLoSO..1534765G. doi: 10.1371/journal.pone.0234765. PMC 7310678. PMID 32574165. S2CID 220046286.
24. 24."Symptoms of Coronavirus". U.S. Centers for Disease Control and Prevention (CDC). 13 May 2020. Archived from the original on 17 June 2020. Retrieved 18 June 2020.
25. Bénézit, François; Le Turnier, Paul; Declerck, Charles; Paillé, Cécile; Revest, Matthieu; Dubée, Vincent; Tattevin, Pierre (2020). "Utility of hyposmia and hypogeusia for the diagnosis of COVID-19". The Lancet Infectious Diseases. 20 (9): 1014–1015. doi:10.1016/S1473-3099(20)30297-8. PMID 32304632. S2CID 215769604.
26. "Coronavirus". World Health Organization (WHO). Retrieved 4 May 2020.
27. Jump up to:[a] [b] "Symptoms of Coronavirus". U.S. Centers for Disease Control and Prevention (CDC). 20 March 2020. Archived from the original on 30 January 2020.
28. Jump up to:[a] [b] Gandhi RT, Lynch JB, Del Rio C (April 2020). "Mild or Moderate Covid-19". The New England Journal of Medicine. doi:10.1056/NEJMcp2009249. PMID 32329974.
29. Wiersinga WJ, Rhodes A, Cheng AC, Peacock SJ, Prescott HC (August 2020). "Pathophysiology, Transmission, Diagnosis, and Treatment of Coronavirus Disease 2019 (COVID-19): A Review". JAMA. 324 (8): 782–793. doi:10.1001/jama.2020.12839. PMID 32648899. S2CID 220465311
30. "COVID-19: epidemiology, virology and clinical features". GOV.UK. Retrieved 18 October 2020.
31. "Q&A: How is COVID-19 transmitted? (How is the virus that causes COVID-19 most commonly transmitted between people?)". www.who.int. 9 July 2020. Retrieved 14 October 2020.

32. Jump up to:[a b c d e] "Transmission of COVID-19". www.ecdc.europa.eu. 7 September 2020. Retrieved 14 October 2020.
33. "Frequently Asked Questions (Spread)". www.cdc.gov. 9 October 2020. Retrieved 14 October 2020.
34. Jump up to:[a b c] "Q&A: How is COVID-19 transmitted? (What do we know about aerosol transmission?)". www.who.int. 9 July 2020. Retrieved 14 October 2020.
35. Jayaweera, M.; Perera, H.; Gunawardana, B.; Manatunge, J. (2020). "Transmission of COVID-19 virus by droplets and aerosols: A critical review on the unresolved dichotomy". Environmental Research. 188: 109819. Bibcode:2020ER....188j9819J. doi:10.1016/j.envres.2020.109819. PMC 7293495. PMID 32569870.
36. Jump up to:[a b] Kohanski, Michael A.; Lo, L. James; Waring, Michael S. (2020). "Review of indoor aerosol generation, transport, and control in the context of COVID-19". International Forum of Allergy & Rhinology. n/a (n/a): 1173–1179. doi:10.1002/alr.22661. ISSN 2042-6984. PMC 7405119. PMID 32652898.
37. Jump up to:[a b c d e] "Transmission of SARS-CoV-2: implications for infection prevention precautions" (PDF). www.who.int. World Health Organization. 9 July 2020. Archived from the original on 9 July 2020. Retrieved 18 September 2020.
38. Jump up to:[a b] "Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19" (PDF). www.who.int. 29 July 2020. Retrieved 14 October2020.
39. Jump up to:[a b] Meyerowitz, Eric A.; Richterman, Aaron; Gandhi, Rajesh T.; Sax, Paul E. (17 September 2020). "Transmission of SARS-CoV-2: A Review of Viral, Host, and Environmental Factors". Annals of Internal Medicine. doi:10.7326/M20-5008. ISSN 0003-4819. PMC 7505025. PMID 32941052.
40. Jump up to:[a b c] "Q & A on COVID-19: Basic facts". www.ecdc.europa.eu. 25 September 2020. Retrieved 8 October 2020.
41. "How COVID-19 Spreads". www.cdc.gov. 5 October 2020. Retrieved 7 October2020.
42. Liu, Tao; Gong, Dexin; Xiao, Jianpeng; Hu, Jianxiong; He, Guanhao; Rong, Zuhua; Ma, Wenjun (2020). "Cluster infections play important roles in the rapid evolution of COVID-19 transmission: A systematic review". International Journal of Infectious Diseases. 99: 374–380. doi:10.1016/j.ijid.2020.07.073. ISSN 1201-9712. PMC 7405860. PMID 32768702.
43. Herscher, Rebecca (12 October 2020). "Scientists Confirm Nevada Man Was Infected Twice With Coronavirus". NPR. Retrieved 12 October 2020.
44. Tillet, Richard L.; et al. (12 October 2020). "Genomic evidence for reinfection with SARS-CoV-2: a case study". The Lancet. doi:10.1016/S1473-3099(20)30764-7. PMID 33058797. S2CID 222295687. Retrieved 12 October 2020.
45. "2019 Novel Coronavirus (2019-nCoV) Situation Summary". U.S. Centers for Disease Control and Prevention (CDC). 30 January 2020. Archived from the original on 26 January 2020. Retrieved 30 January 2020.
46. "Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Persons for Coronavirus Disease 2019 (COVID-19)". U.S. Centers for Disease Control and Prevention (CDC). 11 February 2020. Archived from the original on 4 March 2020. Retrieved 26 March 2020.
47. "Real-Time RT-PCR Panel for Detection 2019-nCoV". U.S. Centers for Disease Control and Prevention (CDC). 29 January

2020. Archived from the original on 30 January 2020. Retrieved 1 February 2020.

48. "Curetis Group Company Ares Genetics and BGI Group Collaborate to Offer Next-Generation Sequencing and PCR-based Coronavirus (2019-nCoV) Testing in Europe". GlobeNewswire News Room. 30 January 2020. Archived from the original on 31 January 2020. Retrieved 1 February 2020.
49. Brueck H (30 January 2020). "There's only one way to know if you have the coronavirus, and it involves machines full of spit and mucus". Business Insider. Archived from the original on 1 February 2020. Retrieved 1 February 2020.
50. "Laboratory testing for 2019 novel coronavirus (2019-nCoV) in suspected human cases". Archived from the original on 21 February 2020. Retrieved 26 February2020.
51. Petherick A (April 2020). "Developing antibody tests for SARS-CoV-2". Lancet. 395 (10230): 1101–1102. doi:10.1016/s0140-6736(20)30788-1. PMC 7270070. PMID 32247384.
52. Vogel G (March 2020). "New blood tests for antibodies could show true scale of coronavirus pandemic". Science. doi:10.1126/science.abb8028.
53. Pang J, Wang MX, Ang IY, Tan SH, Lewis RF, Chen JI, et al. (February 2020). "Potential Rapid Diagnostics, Vaccine and Therapeutics for 2019 Novel Coronavirus (2019-nCoV): A Systematic Review". Journal of Clinical Medicine. 9 (3): 623. doi:10.3390/jcm9030623. PMC 7141113. PMID 32110875.
54. Deeks JJ, Dinnes J, Takwoingi Y, Davenport C, Spijker R, Taylor-Phillips S, et al. (June 2020). "Antibody tests for identification of current and past infection with SARS-CoV-2". The Cochrane Database of Systematic Reviews. 6: CD013652. doi:10.1002/14651858.CD013652. PMC 7387103. PMID 32584464. S2CID 220061130.
55. To KK, Tsang OT, Chik-Yan Yip C, Chan KH, Wu TC, Chan JM, et al. (February 2020). "Consistent detection of 2019 novel coronavirus in saliva". Clinical Infectious Diseases. Oxford University Press. 71 (15): 841–843. doi:10.1093/cid/ciaa149. PMC 7108139. PMID 32047895.
56. Salehi S, Abedi A, Balakrishnan S, Gholamrezanezhad A (March 2020). "Coronavirus Disease 2019 (COVID-19): A Systematic Review of Imaging Findings in 919 Patients". AJR. American Journal of Roentgenology. 215 (1):8793. doi:10.2214/AJR.20.23034. PMID 32174129.
57. "ACR Recommendations for the use of Chest Radiography and Computed Tomography (CT) for Suspected COVID-19 Infection". American College of Radiology. 22 March 2020. Archived from the original on 28 March 2020.
58. Pormohammad, A; Ghorbani, S; Khatami, A; Razizadeh, MH; Alborzi, E; Zarei, M; Idrovo, JP; Turner, RJ (9 October 2020). "Comparison of influenza type A and B with COVID-19: A global systematic review and meta-analysis on clinical, laboratory and radiographic findings". Reviews in Medical Virology: e2179. doi:10.1002/rmv.2179. PMID 33035373. S2CID 222255245.
59. Lee EY, Ng MY, Khong PL (April 2020). "COVID-19 pneumonia: what has CT taught us?". The Lancet. Infectious Diseases. 20 (4): 384–385. doi:10.1016/S1473-3099(20)30134-1. PMC 7128449. PMID 32105641. Archived from the original on 8 March 2020. Retrieved 13 March 2020.
60. https://en.wikipedia.org/wiki/Coronavirus_disease_2019
61. "Recommendation Regarding the Use of Cloth Face Coverings, Especially in Areas of Significant

Community-Based Transmission". U.S. Centers for Disease Control and Prevention (CDC). 28 June 2020.

62. Jump up to:[a b c] Centers for Disease Control and Prevention (3 February 2020). "Coronavirus Disease 2019 (COVID-19): Prevention & Treatment". Archived from the original on 15 December 2019. Retrieved 10 February 2020.
63. World Health Organization. "Advice for Public". Archived from the original on 26 January 2020. Retrieved 10 February 2020.
64. "My Hand-Washing Song: Readers Offer Lyrics for A 20-Second Scrub". NPR.org. Archived from the original on 20 March 2020. Retrieved 20 March 2020.
65. Jump up to:[a b] Centers for Disease Control and Prevention (5 April 2020). "What to Do if You Are Sick". U.S. Centers for Disease Control and Prevention (CDC). Archived from the original on 14 February 2020. Retrieved 24 April 2020.
66. "Coronavirus Disease 2019 (COVID-19) – Prevention & Treatment". U.S. Centers for Disease Control and Prevention (CDC). 10 March 2020. Archived from the original on 11 March 2020. Retrieved 11 March 2020.
67. Verbeek JH, Rajamaki B, Ijaz S, Sauni R, Toomey E, Blackwood B, et al. (May 2020). "Personal protective equipment for preventing highly infectious diseases due to exposure to contaminated body fluids in healthcare staff". The Cochrane Database of Systematic Reviews. 5: CD011621.
68. 68."Wear masks in public says WHO, in update of COVID-19 advice". Reuters. 5 June 2020. Retrieved 3 July 2020.
69. Jump up to:[a b c] "Recommendations for Cloth Face Covers". U.S. Centers for Disease Control and Prevention (CDC). 3 April 2020. Retrieved 3 June 2020.
70. "When and how to use masks". WHO. Retrieved 3 July 2020.
71. Jump up to:[a b c d] "Social distancing: what you need to do – Coronavirus (COVID-19)". nhs.uk. 2 June 2020. Retrieved 18 August 2020.
72. "COVID-19: Use of masks in the community". Ministry of Health NZ. Retrieved 18 August 2020.
73. "Caring for Someone Sick at Home". U.S. Centers for Disease Control and Prevention (CDC). 11 February 2020. Retrieved 3 July 2020.
74. Maragakis LL. "Coronavirus, Social Distancing and Self Quarantine". www.hopkinsmedicine.org. Johns Hopkins University. Archived from the original on 18 March 2020. Retrieved 18 March 2020.
75. Parker-Pope T (19 March 2020). "Deciding How Much Distance You Should Keep". The New York Times. ISSN 0362-4331. Archived from the original on 20 March 2020. Retrieved 20 March 2020.
76. Systrom K, Krieger M, O'Rourke R, Stein R, Dellaert F, Lerer A (11 April 2020). "R_tCovid-19". rt.live. Retrieved 19 April 2020. Based on Bettencourt LM, Ribeiro RM (May 2008). "Real time bayesian estimation of the epidemic potential of emerging infectious diseases". PLOS ONE. 3 (5): e2185. Bibcode:2008PLoSO...3.2185B. doi:10.1371/journal.pone.0002185. PMC 2366072. PMID 18478118.
77. Centers for Disease Control and Prevention (3 February 2020). "Coronavirus Disease 2019 (COVID-19): Prevention & Treatment". Archived from the original on 15 December 2019. Retrieved 10 February 2020.
78. "Social distancing: what you need to do – Coronavirus (COVID-19)". nhs.uk. 2 June 2020. Retrieved 18 August 2020.
79. "WHO-recommended hand rub formulations". WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge Clean Care Is Safer Care. World

Health Organization. 19 March 2009. Retrieved 19 March 2020.

80. Fisher D, Heymann D (February 2020). "Q&A: The novel coronavirus outbreak causing COVID-19". BMC Medicine. 18 (1): 57. doi:10.1186/s12916-020-01533-w. PMC 7047369. PMID 32106852.
81. Liu K, Fang YY, Deng Y, Liu W, Wang MF, Ma JP, et al. (May 2020). "Clinical characteristics of novel coronavirus cases in tertiary hospitals in Hubei Province". Chinese Medical Journal. 133 (9): 1025–1031. doi:10.1097/CM9.0000000000000744. PMC 7147277. PMID 32044814.
82. Wang T, Du Z, Zhu F, Cao Z, An Y, Gao Y, Jiang B (March 2020). "Comorbidities and multi-organ injuries in the treatment of COVID-19". Lancet. 395 (10228): e52. doi:10.1016/s0140-6736(20)30558-4. PMC 7270177. PMID 32171074.
83. Henry BM (April 2020). "COVID-19, ECMO, and lymphopenia: a word of caution". The Lancet. Respiratory Medicine. 8 (4): e24. doi:10.1016/s2213-2600(20)30119-3. PMC 7118650. PMID 32178774.
84. Wang L, Wang Y, Ye D, Liu Q (March 2020). "Review of the 2019 novel coronavirus (SARS-CoV-2) based on current evidence". International Journal of AntimicrobialAgents. 55 (6):105948. doi:10.1016/j.ijantimicag.2020.105948. PMC 7156162. PMID 32201353. Archived from the original on 27 March 2020. Retrieved 27 March 2020.
85. Wang Y, Wang Y, Chen Y, Qin Q (March 2020). "Unique epidemiological and clinical features of the emerging 2019 novel coronavirus pneumonia (COVID-19) implicate special control measures". Journal of Medical Virology. n/a (n/a): 568–576. doi:10.1002/jmv.25748. PMC 7228347. PMID 32134116.
86. Ali, Imran, and Omar M L Alharbi. "COVID-19: Disease, management, treatment, and social impact." The Science of the total environment vol. 728 (2020): 138861. doi:10.1016/j.scitotenv.2020.138861
87. Centers for Disease Control and Prevention https://www.cdc.gov/coronavirus/types.html
88. Di Gennaro F, Pizzol D, Marotta C, Antunes M, Racalbuto V, Veronese N, Smith L. Coronavirus Diseases (COVID-19) Current Status and Future Perspectives: A Narrative Review. Int J Environ Res Public Health. 2020 Apr 14; 17(8):2690. doi: 10.3390/ijerph17082690. PMID: 32295188; PMCID: PMC7215977.

Cite this article as :

Dr. P. Srilatha Reddy, "COVID-19 Prevention and Management : Overview", International Journal of Scientific Research in Science and Technology (IJSRST), Online ISSN : 2395-602X, Print ISSN : 2395-6011, Volume 7 Issue 6, pp. 23-32, November-December 2020. Available at doi : https://doi.org/10.32628/IJSRST20761
Journal URL : http://ijsrst.com/IJSRST20761